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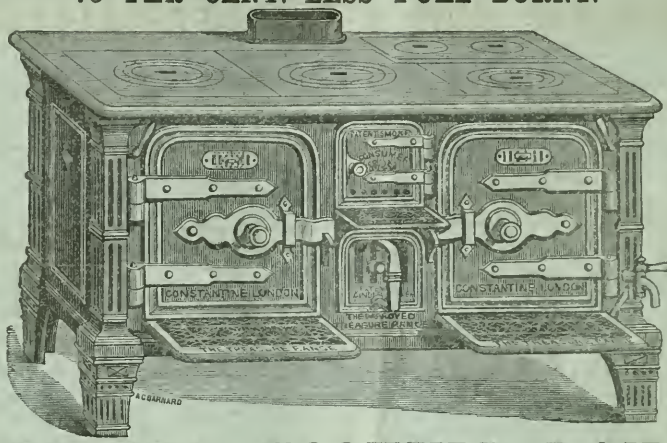

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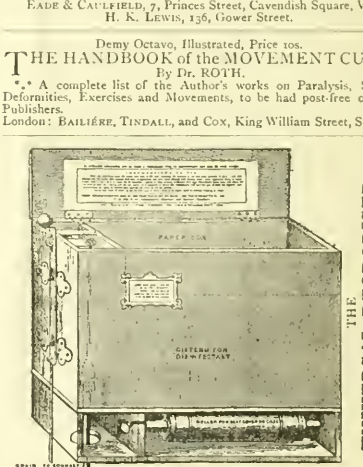

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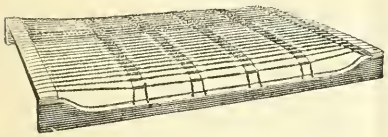

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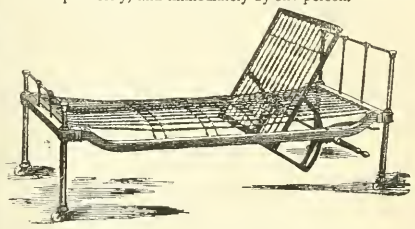

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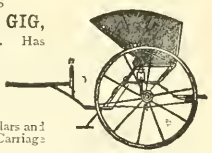

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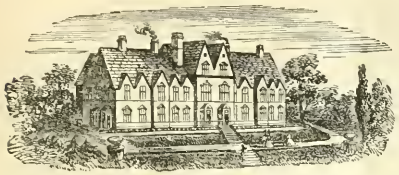

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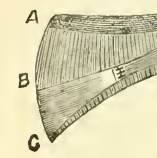

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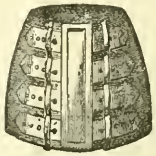

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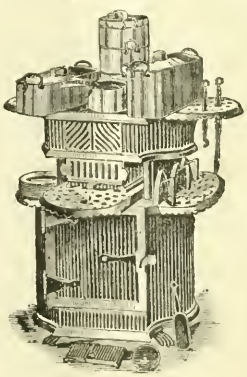

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COBLENZ ON THE EMBRYOLOGICAL ORIGIN OF OVARIAN, UTERINE, AND VAGINAL CYSTS.

During the past year, Dr. Hugo Coblenz of Halle has written some valuable contributions to well-known German periodicals.* In these papers he establishes a more precise and regular relation between cystic tumours in the female pelvis and the development of the female organs of generation, than has hitherto been recognised. His observations are based on a thorough knowledge of the ultimate involution of the Wolffian body and its duct, a knowledge based on careful dissection rather than on tradition.

The transformations of Müller's ducts and their partial fusion, until they ultimately assume their adult form as Fallopian tubes, uterus, and vagina, have little to do with the present subject. In a review of the labours of Professor M. Watson, in the London Medical Record of 1879, the researches of that anatomist, and of others, on the development of the middle and external female organs were sketched at length. The partial obliteration of the Wolffian body was discussed in the same review, but chiefly from a morphological point of view. In the human female, a number of parallel and almost vertical tubes are to be seen in the segment of broad ligament between the Fallopian tube and the ovary. These tubes constitute the parovarium; above, they join a horizontal tube which is blind internally, and ends externally in a cyst-like dilatation sometimes as large as the hydatid of the Fallopian tube, with which it must never be confounded. Inferiorly, the tubes are apparently lost in the ovary. The microscope, however, has detected, beyond any doubt, distinct relics of the Wolffian tubes in the tissue of the hilum of that organ. In the normal adult human female, no trace of the Wolffian body can be found between the layers of the inner part of the broad ligament; but Coblenz and others have observed that, until late in fœtal life, all this region shows parallel tubes, with a single straight tube above, continuous with the outer or permanent 'parovarium'. The excretory duct of the Wolffian body is totally obliterated in the human subject, excepting in very rare monstrosities, where it remains, a homologue of the duct of Gaertner persistent in certain female mammals. It runs, in such cases, into the walls of the uterus, and has even been known to open, unobstructed, close to the clitoris, after descending the vaginal wall. The origin of both uterus and vagina from the fusion of Müller's ducts, to which the Wolffian duct becomes adherent, explains this teratological phenomenon. In horizontal sections of the uterus of a seven months' human fœtus, the Wolffian ducts are plainly visible. In fœtal kittens, they are as readily to be seen in horizontal sections of the vagina, lying in the substance of its anterior wall, close to the urethra.

Putting aside embryology for a time, Dr. Coblenz proceeds to classify the different varieties of cysts originating in the female organs. He divides them into: 1. True ovarian cysts; 2. Cysts of the hilum of the ovary; 3. True parovarian cysts; 4. True cysts of the broad ligament; 5. Para-uterine cysts; 6. Paravaginal cysts. All but the first-class are related in origin, according to Dr. Coblenz, to the Wolffian tube and its duct.

1. The true ovarian cyst is developed wholly and solely from the tissue of the parenchyma of the ovary, the seat of the Graafian follicles, themselves frequently dilated ('hydrops folliculi'), or dilated and fused ('oligocystic tumour). The true ovarian cyst is typically multilocular, with a strong tendency to the development of abundant glandular outgrowths from the inner walls of the secondary cysts. When papillary growths are also detected, this denotes a fusion with certain elements which are the origin of the next variety. The Fallopian tube and broad ligament lie quite distinct from the true ovarian cyst, which has a pedicle often of considerable length. The origin of this kind of cyst is still much disputed. Dr. Coblenz does not enter deeply into this question. The involution of certain Graafian follicles, never perfectly matured, may end in morbid changes, either becoming the corpora fibrosa of Patenko and others,* or undergoing a hyaline or colloid change, which, according to researches made by Dr. Vincent Harris and the reporter,† may be the starting point of the multilocular cyst. The 'colloid degeneration of the stroma', to which these cysts were attributed by Rindfleisch and others, not many years ago, was an appearance described before the involution of the follicles was clearly understood, and was insisted upon by certain pathologists, who might have erred through over-eagerness, in attempting to prove that true ovarian cysts cannot originate from Graafian follicles in any stage of evolution or involution. Noeggerath believes that the true ovarian cyst arises from thickened, dilated, and obstructed blood-vessels. It is, at least, certain that the arterioles of the ovary are subject to a hyaline change, which reduces them to bodies hard to distinguish from degenerate follicles. Patenko and Noeggerath both admit this fact; Dr. Harris and the reporter have a large series of microscopic sections, figured in their monograph, where the resemblance can be traced very distinctly. They found this vascular change so often in considerably enlarged ovaries that were fellows to multilocular ovarian cysts, that they could not deny the possibility of a vascular origin of the cysts themselves.

2. Cysts of the hilum of the ovary are developed in the vascular tissue of the hilum, which contains epithelial and sometimes tubular relics of the Wolffian body. These cysts are generally multilocular, and from their inner walls grow masses of papillary outgrowths. Owing to their origin, they are almost or entirely sessile, but separate from the tube and broad ligament. In some cases, however, they force the layers of that ligament apart, as do the next two varieties, and grow up to the tube. Dr. Coblenz insists on the origin of these and of all the remaining varieties from relics of the Wolffian body. Last spring the reporter exhibited, before the Pathological Society, the ovary of a seven months' fœtus,

* Das Ovarialpapillom (Virchow's *Archiv*, Band lxxxii), Zur Genese und Entwickelung von Kystomen im Bereich der inneren weiblichen Sexualorgane (*ibid.*, Band lxxiv), Die 'papillaren' Adenokystenformen im Bereiche der inneren weiblichen Sexualorgane und ihre Behandlung (*Zeitschrift für Geburtshülfe und Gynäkologie*, Band vii, Heft 1). Zur Ovariotomie (*Archiv für Gynäkologie*, Band xviii, Heft 2).

* London Medical Record, 1881, p. 441.
† *Journal of Anatomy and Physiology*, July 1881.

which contained several cysts filled with papillary growths.* Comparison with the tissue of the hilum in the opposite ovary, convinced him of the true origin of these growths. The Wolffian element of the morbid ovary had become hypertrophied instead of atrophied, and completely checked the development of the parenchyma. As already observed, this second form of cyst may be combined with the first, as a glandular and papillary multilocular cyst.

3. True parovarian cysts are now well known to English pathologists. A good series of diagrams are to be seen in a paper by Dr. Bantock,† quoted by Dr. Coblenz, who has arranged the illustrations of the comparative relations of each kind of cyst on the plan followed in those diagrams. Parovarian cysts are typically unilocular, with no growths from their inner walls, and contain a clear watery fluid, instead of the glairy coloured contents of the first two varieties. They lie between the folds of the broad ligament, pushing up as far as the Fallopian tube, which thus comes to lie on the outer wall, with its fimbriæ widely stretched. The ovary hangs below them, generally, as the reporter has observed, flattened and atrophied, but sometimes absolutely unaffected. The segment of tube and broad ligament, internal to the parovarium, makes a good pedicle to these cysts. When the so-called parovarian cyst contains papillary growths, as in a specimen now in the museum of the Royal College of Surgeons, and taken from a case that died of tetanus after operation, its origin from the parovarium is tolerably certain, as it differs in no respect from the cysts developed from other parts of the Wolffian relics. It is otherwise with the commoner variety, which bears no intracystic growths. Small cystic bodies, perfectly spherical, are often detected lying between the layers of the broad ligament over the tubes of the parovarium, yet apparently separate from that structure. The lining membrane of the common 'parovarian' cyst being identical with that of the tubes of the Wolffian body, Dr. Coblenz insists on its origin, like the hilum cysts and those about to be described, being truly Wolffian, possibly from detached loops of the tubes of the parovarium. Certainly a cyst in the glandular substance of the kidney, clearly separate from the uriniferous tubules, would still be called a renal cyst; in this manner a cyst among, but distinct from, the tubes of the parovarium, should be termed parovarian. Yet minute detached cysts, identical with those over the parovarium, are very frequently detected far from that structure, lying under the broad ligament as it passes over the upper border of the Fallopian tube. This suggests, possibly, some common non-Wolffian origin.

4. True cysts of the broad ligament are developed, according to Coblenz, from relics of the obliterated part of the Wolffian body, occupying that portion of the broad ligament which lies between the inner part of the tube above, the ovarian ligament below, the parovarium externally, and the uterus internally. This seat of origin, and the almost constant presence of papillary growths, identical with those seen in cysts of the hilum of the ovary, favour Dr. Coblenz's theory. In any case, this variety must be distinguished from the parovarian cysts. Cysts of the broad ligament, of necessity, force apart the layers of the ligament as they grow. Their increase is rapid, for they are equally in communication with the trunks of the ovarian and the uterine arteries. They do not always grow in the same direction; some push the anterior layer of the broad ligament forwards, others push back the posterior layer, and then increase, forming large tumours behind the uterus. Others part the layers of the ligament asunder below and grow into the cellular tissue around the vagina, pushing forwards the walls of that canal. A still rarer class push themselves laterally under the peritoneum, after escaping from the ligament, till they come into direct contact with the cæcum or sigmoid flexure, when they grow upwards; or, growing downwards, they may force their way between the rectum and uterus, pushing up the fold of Douglas. The rarest kind push forwards along the anterior wall of the vagina, the back and sides of the bladder, and the subperitoneal cellular tissue, so that ultimately they lie immediately under the abdominal wall, entirely in front of the peritoneum. Coblenz quotes clinical records of all these varieties. It is only by the continuous pressure of a cyst of this kind, with simultaneous morbid changes in the serous membrane, that the broad ligament can be forced apart below. Guérin and Lebec have shown that, normally, the lower limits of the two layers of the ligaments are united and cut off from the structures beneath them by very dense cellular tissue,* and inflammatory exudations cannot force them apart. Cysts of the broad ligament form large multilocular tumours, generally filled with clear fluid and abundant papillary growths. They are completely sessile, and often in dangerous proximity to the ureters or large intestines. Spencer Wells and other authorities have given good descriptions of the great difficulties experienced in operating for the removal of these cysts. The papillary growths, perforating the walls, often spread on to the peritoneum, or, at least, cause ascites.

5. Para-uterine cysts are extremely rare. They spring from unobliterated segments of the upper part of Gaertner's duct, and push the uterus aside, bulging outwards and upwards from it, so that a kind of pedicle may exist; but uterine tissue must be cut into, and it is generally impossible to enucleate the deepest part of the cysts. These tumours rarely contain papillary growths, for they arise from a duct rather than from the true adenomatous tissue of the Wolffian body.

6. Paravaginal cysts, developed, according to Coblenz, from the lower part of Gaertner's duct, have been described, and may be papillomatous. They resemble the variety of broad ligament cyst, which forces itself downwards; but in a paravaginal cyst the broad ligament, tube, and ovary, lie in a normal condition, and entirely above them. Dr. Coblenz does not state whether he considers the common cyst of the vagina, found close to the urethra, to be developed from the lowest part of Gaertner's duct; but, considering where that duct opens, when it is teratologically permanent, such a theory is quite admissible.

Through the adoption of a truly scientific method, Dr. Coblenz has been more successful in making a satisfactory classification of cysts of the female organs than have any of his predecessors; and it is only the origin of the true ovarian cyst that yet re-

* *Trans. Path. Soc.*, vol. xxxii.

† On the Pathology of certain so-called Unilocular Ovarian Cysts (*Trans. Obstet. Soc.*, vol. xv).

* *Gazette Hebdomadaire de Médecine et de Chirurgie*, April 11th, 1851; *British Medical Journal*, vol. i, 1851, p. 889. It is through the medium of the lymphatics, and not by direct accumulation and pressure downwards, that inflammatory deposits extend beyond their original limits, in cases of pelvic cellulitis.

mains unsolved. A very fine series of diagrams accompanies this author's paper in the eighty-fourth volume of Virchow's great treasury of pathological science. Alban Doran.

DRAGENDORFF ON BLOOD-STAINS.

Dragendorff has published a valuable memoir on the detection of blood-stains (*Untersuch. über Blutspuren; Pharm. Jour.*, vol. xii, p. 586). Hæmoglobin possesses the power of absorbing oxygen, which is again given off in contact with reducing agents. Oxyhæmoglobine, examined spectroscopically, shows a characteristic spectrum. It is soluble in water, as well as in aqueous solutions of potassium iodide, borax, and very dilute potash or ammonia. These saline solutions dissolve the oxyhæmoglobine from old blood-stains more readily than pure water. A cold saturated solution of borax is especially to be recommended for this purpose, since the solution is not liable to decompose. Oxyhæmoglobine loses oxygen when placed in contact with reducing agents, and it then yields a characteristic spectrum of reduced hæmoglobine. If ammonium or sodium sulphide be used as the reducing agent, the spectrum of the reduced hæmoglobine may pass gradually into that of sulphohæmatine. Acetic acid and similar agents transform hæmoglobine into hæmatine, which likewise possesses a characteristic spectrum. Warming with dilute solutions of potash or soda sometimes converts it into reduced hæmatine. The guaiacum and hydrogen dioxide test, being one of the most delicate, should never be omitted. It has, however, only a limited value, since other organic substances yield a similar reaction.

Among the many reagents for the precipitation of blood-pigment, tannin and zinc acetate are especially serviceable, since the hæmoglobine or hæmatine is not decomposed, and the presence of borax, or of the salts present in spring-water in the solution, does not affect the precipitation. The so-called hæmine crystals may be obtained from the above precipitate, or from dried blood, by allowing a little of it in a drop of glacial acetic acid, with a fragment of common salt, to evaporate to dryness at the ordinary temperature, or by warming to 60 or 80 deg. Cent. (140 to 176 deg. Fahr.). The latter method is not so certain, and the test requires some practice to ensure success.

After an examination of the spots themselves, when the quantity at disposal is only small, it is advisable to remove particles of dried blood, when possible, with a knife, reserving the dried blood for further examination, and to apply the tests to the scraped spot in the following order. One spot may suffice for several reactions.

1. The guaiacum test. A small piece of filter-paper is moistened with distilled water, laid upon the spot, and frequently pressed down with a glass rod. After from five to thirty minutes, it is removed and moistened with oil of turpentine which has been exposed for some time to the action of the air, and fresh tincture of guaiacum. The blue coloration must make its appearance within a few minutes. If the coloration do not make its appearance, it will scarcely be possible to detect blood by any other test. An affirmative reaction does not, however, necessarily prove the presence of blood.

2. Another, or the same, spot is macerated with a drachm or so of a cold saturated solution of borax, either at the ordinary temperature, or at 40 deg. Cent. (104 deg. Fahr.). The solution gradually assumes a red or reddish-brown colour, if blood be present. In this case, it must be examined with the spectroscope for oxyhæmoglobine. It has been urged against this test, that other solutions, such as certain red inks made from cochineal, a colouring matter in the feathers of the banana-eater, and purpurine-sulphuric acid, may show similar spectra. The first may be recognised by their being decolorised by chlorine water without producing a precipitate. The second does not yield the spectrum of reduced hæmoglobine. To obtain this from oxyhæmoglobine, treatment with a solution (1 to 5) of sodium sulphide is recommended. The last, purpurine-sulphuric acid, only yields a spectrum when the solution is hot.

3. If the spectroscopic test succeed, the guaiacum test may be repeated with a small quantity of the solution.

4. The solution is diluted with 5 to 6 volumes of distilled water, and a 5 per cent. solution of zinc acetate added as long as a precipitate forms. This is filtered off and washed slightly. This precipitate, dissolved whilst moist in about 20 drops of glacial acetic acid, shows the hæmatine spectrum, if sufficient blood be present.

5. A small portion of the precipitate may be dissolved on a slide in a drop of glacial acetic acid, a very small crystal of common salt added, and allowed to dry slowly by exposure to the air. The slide may then be examined microscopically for hæmine crystals.

6. If any dried blood have been scraped from the spot, a few fragments may be used for the hæmine crystals, as under 5. After recognising these, the slide may be washed with a little water, and the guaiacum test tried.

Finally, the remainder may be incinerated, and the ash tested for iron. If plenty of the material be at disposal, nitrogen may be detected by the usual methods; but, if the spots be upon iron, it must be borne in mind that iron-rust may absorb ammonia and so yield the nitrogen test. Wool, silk, hair, etc., can also be sources of error. The detection of blood upon rusty iron is difficult, from the fact that the blood-pigment forms a compound with the iron-rust which is not readily soluble. Borax solution at 50 deg. Cent. (122 Fahr.) removes hæmoglobine from this compound. The solution thus obtained may be examined as above described; or the rust may be treated with warm acetic acid, and examined spectroscopically for hæmatine.

To ascertain the source of the blood, the following methods are serviceable

7. If the blood be fresh, the size and shape of the corpuscles may be of service, since they differ, though not very greatly, in different animals; but, in partially decomposed, and in dried blood, the corpuscles are generally so much altered as to render the examination difficult, and the results unreliable. A thin fragment scraped from a blood-stain may be examined in turpentine under the microscope, or soaked in solutions which either do not at all, or only slightly, attack the corpuscles. After removing the hæmoglobine as far as possible with such solutions, the residue may be tested with an aqueous solution of iodine. The blood-fibrine which is undissolved absorbs iodine and renders itself thus evident. Proof of the presence of fibrine may be of importance, since its complete absence would indicate the use of a defibrinated blood, perhaps to simulate a crime.

8. Possibly hairs, fish-scales, etc., imbedded in

the blood, may indicate its origin. Often, too, the dried blood, warmed with a little dilute sulphuric acid, evolves an odour peculiar to the animal from which the blood was derived.

9. Blood from the stomach, etc., frequently contains epithelium-cells and sarcinæ; that from abscesses, fat, pus-corpuscles, and cholesterine. In cases of alleged defloration, epithelium-cells and spermatozoa should be searched for.

10. Bug and flea spots differ in appearance. The residue is free from fibrine and from blood-corpuscles.

The exact determination of the age of a blood-stain is not possible. The older the stain, the more difficult it is to extract the hæmoglobine. An aqueous solution (1 in 130) of arsenious acid dissolves a spot one or two days old in the course of about fifteen minutes; one eight days old, in about half an hour; after two or three weeks, in one to two hours; after four to six months, in three or four hours; and after a year, in four to eight hours.

Solution of borax is recommended for the extraction of blood from earth, etc. Such a solution may be examined spectroscopically, and 0.5 per cent. of blood may be thus detected.

Highly diluted blood, such as, for instance, soapy or spring water containing small quantities of it, may be precipitated with zinc acetate. One part of blood in 6,000 parts of water can be easily detected; but the limit in urine is 1 in 1,000, and certain constituents of the urine render the detection more difficult. THOMAS STEVENSON, M.D.

LANGER ON THE CHEMICAL COMPOSITION OF HUMAN FAT AT DIFFERENT AGES.

DR. LUDWIG LANGER has carried out in Professor Ludwig's laboratory in Vienna a series of researches on the chemical constitution of human fat in children and adults (*Sitzungsber. der Kaiserl. Acad. der Wissensch.*, June 1881; and *Allgem. Med. Central-Zeitung*, No. 1, 1882).

The investigations of Fleming, Toldt, Löwe, and others, have proved that the chemical process of the formation of fat takes place in the fat-cells, which not only take part in its formation, but also in its decomposition.

A comparison of the adipose tissue in a newly born child and in an adult man discloses remarkable physical differences. The adipose tissue in the adult varies in colour from clear yellow to brownish, and is very soft; and, on making a section of the panniculus adiposus, little drops of oil exude. Microscopic examination shows in each fat-cell one or more clear drops of oily matter, and it is only in quite exceptional cases that acicular crystals of fat are found. On the other hand, the panniculus in the body of an infant is remarkably firmer and harder. It is greyish white in colour, and readily crumbles, like wax that has been boiled in water. On microscopic examination, numerous crystals are seen in almost every cell. Dr. Langer's present researches show that the fat of the child and of the adult present essential differences in regard to the relative proportions of the chemical constituents.

The author further points out, that there are some differences between the newly born child and the adult, with regard to the general distribution of the fatty tissue. The development of the adipose tissue commences in the second half of fœtal life. In well nourished newly born children, the renal capsules show only small quantities of fat, while on the other hand, nearly all the fat is concentrated in the subcutaneous tissue. Comparison shows that the panniculus adiposus of the child is relatively five times as thick as that of the fattest adult.

The fat obtained from the panniculus of the infant and of the obese adult presents a marked difference. At the ordinary temperature, the child's fat forms an uniform white tallow-like mass, the melting point of which is 45 Cent. (113 Fahr.); the fat of the adult separates into two layers, the upper one of which is fluid, transparent, yellow in colour, and does not solidify until a temperature below freezing point is reached, while the lower layer appears as a crumbly crystalline mass, which becomes fluid at 35 Cent. (96.8 Fahr.)

By saponification, and separation of the acids, Dr. Langer found that in the newly-born child 100 grammes of the fatty acids contained 32.75 grammes of solid acids, while in the adult the same quantity contained only 10.2 grammes. Thus the fat of the newly born child contained about three times as much solid acid (palmitic and stearic) as that of the adult. The percentages are as follows:

	Child.		Adult.
Oleic acid . .	65.75	...	89.80
Palmitic acid . .	28 97	...	8.16
Stearic acid . .	3.28	...	2 04

The fat of the newly born child thus contains more glycerides of palmitic and stearic acids, and less of oleic acid, than the fat of the adult.

According to Dr. Langer, one form of sclerema neonatorum is connected with the condition of the fat. Sclerema neonatorum is either a result of serous infiltration of the skin and subcutaneous areolar tissue, or of the solidification of the fat in the panniculus adiposus. The latter form is to be regarded as a phenomenon consecutive on various diseases, such as inflammation of the lungs, in the course of which collapse and lowering of the temperature of the body occur. As has been already said, the melting point of the infant's fat is 45 Cent. (113 Fahr.)—that is, far above the temperature of the body. 'It cannot', Dr. Langer says, 'be assumed that the fat has a lower melting point within the body than outside it. It hence follows that even in the living child a large portion of its fat is not fluid, but only in a sufficiently soft condition. If the temperature of the body fall, whether through collapse or in consequence of withdrawal of heat from without, it can be readily understood that the fat in the panniculus adiposus will solidify, and a fatty sclerema will be produced. A fall of the temperature to 32 Cent. (89.6 Fahr.), sometimes lasting for days before death, is not unfrequently observed in some illnesses of newly born children. With such a temperature, as I have convinced myself by experiment, the fat in the panniculus adiposus is quite solidified. The occurrence of fatty sclerema is not possible in the adult, because of the different condition of the fat, and because the temperature of the body can never fall so low during life as to cause solidification of the fat in the adult.' A. HENRY, M.D.

GUNNING ON BACTERIA IN EXPIRATION.

IN the January number of the *Klinische Monatsblätter für Augenheilkunde*, Professor Gunning has communicated a paper on the existence of bacteria in the air of expiration. This question was raised

by Professor Becker at the International Medical Congress held in Amsterdam, 1879, and it was there maintained that the cause of certain unsuccessful operations on the eye was to be sought in the presence of bacteria in the breath of the operator and by-standers, and that the foul-smelling breath of certain individuals was to be taken as proof of bacterial activity.

After some remarks on the labours of other observers, who have shown that bacteria exist freely on the mucous surfaces of the oral and nasal cavities, the author alludes to the notion prevalent in medical circles that spores from these cavities are widely distributed by the air of expiration, and which he declares is refuted by Nägeli's theory that solid matters cannot pass into the air by evaporation from fluids or damp substances, and therefore also bacteria do not find their way into the air of expiration. He next proceeds to recount Lister's observations on wounds of the pleura from fracture of the ribs, and then refers to Tyndall's experiments in 'Dust and Disease'. But, as Professor Gunning was not satisfied that, though air might be 'optically pure', it might not contain a large quantity of floating dust particles (*e.g.*, the *Spaltpilze* of Nägeli), he determined to institute a series of experiments to solve the question. To this end he began by infecting sterilised infusions of meat with a drop of saliva taken (*a*) from the general secretion of the mouth; (*b*) from secretion obtained by irritating the hard palate. The tubes were kept at a temperature of 30 deg. to 35 deg. Cent. (86 to 95 Fahr.), and in forty-eight hours all of (*a*) and just half of (*b*) were found to be cloudy. The rest of the (*b*) tubes remained perfectly clear to the end of the experiments, made in the hottest period of the year. Hence Professor Gunning concludes that there is a distinct difference of putrefactive energy in the saliva collected from the whole of the oral secretion, and that which is taken from a part, and is of opinion that, in saliva freshly secreted and obtained with proper precautions, few micro-organisms, or even none, exist.

Having thus shown that the air of respiration has plenty of opportunity to take up bacteria, he then commences other experiments to prove that it does not. A flask (A), the neck of which divides into two arms (C and D), and one of these (D) bifurcates again into E and F, is charged with meat-infusion and sterilised by boiling. During ebullition, C, E, F, are closed with plugs of cotton-wool. In order to ascertain if perfect sterilisation have been effected, the flasks are left for some days. The experiment begins by the insertion of the end F in the mouth, and the removal of the cotton-wool plug with the tongue. Air of expiration is then driven through the apparatus from twenty to thirty minutes, and the experiment ends by pushing the plug at E as far as D. In infusions experimented on in the above manner, no trace of putrefaction was ever detected; and Professor Gunning states that he has still two flasks, prepared with these precautions, which are perfectly clear after the lapse of two years.

In a further series of experiments, the expired air was driven directly through the infusion. A U-shaped tube took the place of the half-filled bulb, but in other respects the apparatus was similar, and the results exactly the same.

From the above experiments, Professor Gunning concludes that inspired air is freed from bacteria which may have been contained therein; and that the expired air does not carry bacteria along with it out of the body. R. G. Hebb, M.D.

TILLMANNS ON FISTULOUS COMMUNICATIONS BETWEEN THE GASTRO-INTESTINAL CANAL AND THE CHEST.

Dr. H. Tillmanns reports, in von Langenbeck's *Archiv*, Band xxvii, Heft 1, a case observed by himself and Dr. Neubert of Leipsic, of fistulous communication between the intestinal canal and the right pleural cavity. The patient was a lad aged 15, who, on the morning of June 9th, 1880, was seized just below his arms by a friend and swung forwards and backwards in sport. After his dinner he vomited twice, and during the following night was taken with acute pain in the right hypochondrium. This pain persisted and increased in severity, and the patient was compelled to lay up. On the ninth day, and after the tenderness in the region of the liver had been slightly relieved, signs of effusion on the right side of the chest were presented. On the fourteenth day, he was suddenly attacked with intense pain over the whole of the right side of the chest, and with increased tenderness in the abdomen. Dulness on percussion was made out over the whole of the right lung, except in the second, third, and fourth intercostal spaces near the sternum, where there was a well-marked tympanitic sound. At the same time the patient suffered much from dyspnœa, and presented symptoms of collapse. He was also very feverish. The space between the fifth and sixth ribs on the right side having been punctured, about a pint of thin greenish purulent fluid, with a decided fæcal odour, was withdrawn by aspiration. This exudation was mixed with fluid intestinal contents and with bile. On the sixteenth day, a free opening was made in the wall of the chest, and the purulent cavity was washed out with a solution of salicylic acid and drained. The external opening was covered by antiseptic dressings; and, during a period of four days after the second operation, the right side of the chest was washed out twice daily by a solution of permanganate of potash. Subsequently, and when the strength of the patient had improved, carbolic acid was substituted for the permanganate in the injections. The discharge, which, until the middle of August, occasionally had a fæcal odour, and presented minute fragments of food, diminished steadily, save with one relapse after premature removal of the drainage-tube on August 14th, and, at the end of the fifth month, had altogether ceased. After an interval of six months from the date of the injury, the patient was quite well.

In his comments on this case, Dr. Tillmanns states that, from what he has been able to make out from a study of the literature of pathological communications between the abdominal and thoracic cavities, the formation of a fistula leading into the chest from any part of the intestinal canal is a very rare occurrence. Communications are much more frequently established between the upper portions of the digestive tract—the œsophagus and stomach, and the thoracic cavity. The best known example of such is a cancerous perforation of the œsophagus involving the pleura. Gastro-thoracic fistula is occasionally formed in cases of ulcer of the stomach, and of diaphragmatic hernia. Of much more frequent occurrence are cases of perforation of the diaphragm, by purulent collections formed in the liver or some other solid abdominal viscus.

The symptoms observed in this case soon after the receipt of injury and the occasional presence in the discharge of half-digested food indicated, in the opinion of Dr. Tillmanns, a rupture of the duodenum

near its junction with the jejunum and the attachment of the band of smooth muscular fibres known as Treitz's muscle. It is thought that this patient might probably have had ulceration of the duodenum, an affection which often runs a latent course until a sudden termination in fatal perforation. In consequence of this supposed perforation of the duodenum, suppuration, it is thought, had been established, the fæcal abscess having been either shut off from the abdominal cavity by inflammatory adhesions, or having, from its origin, been extraperitoneal. The pus might have passed along the yielding connective tissue or along the posterior abdominal wall, and finally have penetrated through the diaphragm, and set up fæcal pyo-pneumo-thorax in the right pleural cavity. Though regarding this as the most probable explanation of his case, Dr. Tillmanns would not altogether reject the theory of its origin in gangrenous diaphragmatic hernia, and in perforation of a small loop of intestine tightly constricted by the margins of a small orifice in the muscle. It is pointed out, however, that this view is opposed by the facts of the spontaneous closing of the fistula soon after thoracotomy, and of the complete recovery of the patient. In considering the probable course of the fæcal abscess from the abdominal to the thoracic cavity, Dr. Tillmanns insists on the clinical importance of the interspaces free from muscular structure, which have been described by Henle as existing between the costal and vertebral origins of the diaphragm. These interspaces, occupied merely by opposed layers of peritoneum and pleura, are of importance with regard to the conditions of diaphragmatic hernia, of subphrenic, hepatic, and renal abscesses invading the chest, and of large hydatid and other tumours in the upper part of the abdomen.

Dr. Tillmanns has collected twenty-two cases of fistulous communication between the chest and the intestinal canal. In fourteen of these cases, the fistula led from some part of the large intestine (vermiform appendix, ascending colon, hepatic flexure of colon, transverse colon), and in the remaining eight cases from the small intestine. In three cases, fistulæ leading from the duodenum had opened through the posterior wall of the chest, without having perforated the pleura. The most frequent cause of the fistulous communication, according to these collected cases, is perforating ulcer of intestine (fourteen out of the twenty-two cases). In five cases, the fistula was the result either of traumatic suppuration, or of gangrenous diaphragmatic hernia caused through injury. In one case, the communication between the chest and intestinal canal originated in a pulmonary abscess caused by the presence in a lung of a foreign body. In the cases in which the fistula resulted from perforating ulcer of the intestine, the vermiform appendix was the original seat of the disease in six instances, the hepatic flexure of the colon in two, and the duodenum in five. In three cases the fistula communicated with one lung, and in three other cases it passed between the pleura and the thoracic wall. In every case of perforating intestinal ulcer, the fistula was on the right side of the chest; of the eight cases of fæcal fistula that had originated in gastric ulcer, in injury, in action of foreign bodies, or diaphragmatic hernia, in five the fistula was on the left, and in three on the right side.

In some remarks on the treatment of thoracic fæcal fistulæ, Dr. Tillmanns states that it is proved by his case that this condition may be cured by thoracotomy and drainage of the cavity in the chest, and that spontaneous closing of the intestinal perforation may follow evacuation of an intrapleural and probably also of a subphrenic fæcal abscess. It is suggested, that resection of the perforated portion of intestine might be justifiably resorted to in cases of fæcal abscess with persistent intestinal communication. It is well known that good results have been attained from antiseptic resection of the affected portion of intestine, in cases of false anus and of gangrenous hernia. Equally valid indications for such treatment might be presented in certain cases of thoracic fæcal fistula, and of subphrenic fæcal abscess. In many cases, also, of perforation of the œsophagus and stomach, cure might possibly be brought about in a similar manner, with or without stitching together of the divided organ, if it were possible to drain effectually the abscess caused by such perforation. Again, in recent cases of perforation at some portion of the gastro-intestinal canal, success might attend very early laparotomy and stitching of the perforated gut or stomach. The result of this treatment in such a condition would depend mainly on the points whether and, if so, to what extent, the contents of the digestive canal had been poured out into the peritoneal sac, and whether the consequent peritonitis were diffused or circumscribed.

W. Johnson Smith.

OLLIER ON JUXTA-EPIPHYSAL SPRAIN.

In a contribution to the *Revue de Chirurgie*, No. 10, 1881, on juxta-epiphysal sprain, and its direct and remote results with regard to inflammation of osseous structure, M. Ollier describes the lesions that may be produced in a long bone, near one of its extremities, by violent movements of the contiguous articulation, or by violence applied to the bone itself. In the adult, the usual results of violent movement of an articulation are stretching and laceration of its ligaments, with or without separation of the osseous processes to which some of the ligaments are attached. In young children, on the other hand, particularly those under the age of three years, the ligaments and cartilages offer resistance; and it is beyond the articulation, and at the weakest and most yielding part of the long bone, that the lesion is produced. This lesion consists, in some instances, in epiphysal separation in its first degree; in other instances, in incomplete fracture near the epiphysal line. The following lesions are mentioned as the probable results of the so-called epiphysal sprain: crushing, compression, and fracture of the spongy bone-tissue; indentation and partial fracture of the thin peripheral layer of compact tissue; and, as consequences of these lesions, squeezing out of the medulla, and effusion of blood into the medullary spaces and under the periosteum. These injuries are more likely to result from violence to the contiguous articulation, when the consistence of the bone has been impaired through rickets or any other condition of acute or chronic disease, that has a tendency to interfere with the nutrition of the osseous structure. As these lesions usually affect the interior parts of the bone, and do not involve the periosteum, which membrane remains intact, they are liable to be overlooked by even the most experienced surgeons. The absence of displacement and of readily appreciable anatomical lesions, will account for the slight importance that has hitherto been attached to the disturbances caused by sprain of a joint in a young patient. According to Professor Ollier, the so-called growing

pains, which affect some infants at the period when the growth of the skeleton is most active, are often the result of falls and of excessive movements, and may be explained by the feeble consistence of the recently formed juxta-epiphysal portions of long bones. The attention of M. Ollier was first directed to this point, about eighteen years ago, by a singular case of arrest of growth in the humerus, without suppuration or violent inflammation, which had followed a fall on the arm.

Juxta-epiphysal sprain may give rise to a more or less painful swelling, restricted to the part of the long bone near the epiphysal line, whilst the neighbouring articulation remains quite free. There is, in most cases, slight tenderness, which ceases spontaneously in the course of a few days. Tissue-repair, in young children, is extremely rapid; the periosteum swells at once, and, when thus swollen and thickened, restricts the abnormal mobility in the juxta-epiphysal region, which, in the more severe forms of sprain, is the immediate result of compression and crushing of the spongy bone-tissue, of laceration of the peripheral layer of the compact tissue, and of loosening of the subchondroid spongy layer. Even in the most severe forms of juxta-epiphysal sprain, the periosteum soon attains sufficient thickness and resisting power, to enable it to form a kind of splint, and to render diaphysis and epiphysis quite immovable. Speedy recovery usually takes place in children that are healthy and well-nourished; but in those that are not well cared for, and are scrofulous, and have a hereditary predisposition to tubercle, and especially in those with swollen and caseating lymph-glands, the prognosis is less favourable. In this latter class of patients, the trabecular fracture, or the effusion of blood into the cancellated tissue, is very likely to become the origin of chronic and painless osteo-myelitis, a condition usually regarded as an immediate or direct result, or rather as a spontaneous product of scrofula. As a cutaneous affection may give rise to swelling of the neighbouring lymph-glands, and as irritation of a mucous membrane may be the origin of deep-seated adenitis and of splanchnic tuberculosis, so, in a case of trabecular fracture, the crushed medulla may become the starting-point of a neoplasm, lymph-cells may accumulate in the medullary spaces, pass into a condition of fatty degeneration, and form caseous foci, which, progressively infecting the bone, will lead, in a predisposed subject, to any of the varying forms and consequences of osseous tuberculosis. In order to prevent any dangerous results from juxta-epiphysal sprain, the surgeon has only to keep the injured limb at complete rest for a certain time, and, if there be much swelling and effusion of blood, to apply compression at the seat of injury. The necessity is pointed out of carefully examining any infant, any of whose limbs has been the seat of violent movement, or has been injured in a fall. If, on examination, a juxta-epiphysal swelling, whether painful or indolent, be made out, then the little patient should be kept at rest, and watched until the bone has returned to its normal size.

In conclusion, Professor Ollier writes of the relations of juxta-epiphysal sprain with the lesion observed frequently in the forearm of infants, and known by the name of painful pronation, and with regard to which many theories have been put forth. Many surgeons have sought in the articulations for the cause of this injury, some regarding it as a lesion of the wrist, others as a lesion of the elbow. Goyrand, who attributed it at one time to forward luxation of the upper extremity of the radius, subsequently regarded it as due to luxation of the triangular cartilage of the radio-carpal joint. Professor Ollier, from both clinical observation and experimental research, has been led to regard this lesion of painful pronation as a juxta-epiphysal sprain of the lower end of the radius or ulna, accompanied by more or less stretching of ligaments, muscles, and other external structures, but consisting essentially, in children below three years of age, in the lesions already mentioned, such as torsion of bone-structure, inflexion or indentation of peripheral compact tissue, trabecular ruptures in the spongy tissue, and detachment of periosteum.

W. Johnson Smith.

WIGHT ON FRACTURE OF THE NECK OF THE FEMUR.*

When we have admitted the uncertainty and the not unfrequent impossibility of making a diagnosis of fracture of the femoral neck, we may ask the following question: 'Are there any signs by which we can be reasonably sure that there is a fracture of the neck of the femur, on the supposition that crepitus is absent, and that it is not good practice to try to find crepitus?'

In order to bring some points to bear on the settlement of this question, I have tabulated the records of twenty-one cases of fracture of the femoral neck that I have seen, some with other surgeons and some in my own practice. The records that I have tabulated contain the following measurements: 1. Inside measurements from the superior anterior spines of the ilia to the lower ends of the internal malleoli; 2. Outside measurements from the superior anterior spines of the ilia to the lower ends of the external malleoli; 3. Measurements from the tops of the great trochanters to the lower ends of the external malleoli; 4. Measurements from the bases of the tibiæ to the lower ends of the internal malleoli; 5. Measurements from the superior anterior spines of the ilia to a line drawn transversely in front between the tops of the great trochanters. This is the transverse femoral line.

The object of all these comparative measurements is to determine the possibility of original symmetry of the two limbs, and to find out, as far as possible, if the injury to the hip have caused any shortening of the limb on the injured side, so that we can infer the probability of there being a fracture of the femoral neck. Let me repeat, in this connection, some of the points constituting reliable surgical measurements. 1. The instrument of measurement should be an accurate steel tape-line, with feet and inches on one side, and mètres and centimètres on the other side. This tape-line will not elongate under tension, and the ordinary tape-line will elongate under tension. 2. The measurements should be made independently; that is, when one is made, the points of the tape-line should be removed from the surgeon's hands, and new points for the other side of the body should be determined without any reference to the measurement of the first side. 3. In all ordinary cases, the leg may be measured quite accurately by semi-flexing it on the thigh, for this position brings the anterior edge of the base of the tibia markedly under the integument, so that it can be made quite as accurate a point of measurement

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as the superior anterior spine of the ilium. 4. In most cases, the tops of the great trochanters can be so accurately compared, as to make the measurement from them to the external malleoli of considerable value. 5. In all cases, the personal equation of the surgeon should be most carefully excluded from any measurement. 6. The lower limbs should be put parallel with the pelvis; for, in the ordinary measurements, adduction elongates and abduction shortens the lower limb.

1. In all the twenty-one cases above recorded, there was more or less obliteration of the abdomino-femoral—or inguinal—fold on the side of the injury. This was probably due to two causes; *a*. Effusion in front of the injured femoral neck; *b*. Contraction of the soft parts in front of the femoral neck. 2. About one-half of the patients were examined standing up; and when the foot of the injured side was brought down to the floor, the gluteo-femoral fold on that side was seen to be lower than the gluteo-femoral fold on the uninjured side. 3. There was out-rotation of the injured limb in all of the above cases. In Cases I and II the out-rotation was not marked. 4. In all the cases of impaction of the base of the femoral neck, the upper end of the femoral shaft was materially enlarged. There were probably eight such cases. 5. In all of the cases of impaction of the top of the femoral neck into the femoral head, the upper end of the femoral shaft was not enlarged. There were probably five such cases. 6. The other eight cases could not probably belong to either of the above classes. 7. In all of the above cases, there was more or less prominence of the outside of the hip, but the gluteal region was somewhat flattened; and generally there was a fusiform enlargement of the upper part of the thigh. 8. In fourteen of the twenty-one cases there was more or less asymmetry of the lower limbs; and this point is important for two reasons. First, it was determined by measuring from the tops of the great trochanters. Second, it agrees with the general fact, that about two persons out of every three have asymmetry of lower limbs. Hence, the above measurements from the tops of the great trochanters to the external malleoli were probably correct. Hence, such a measurement may be recommended as a valuable aid in making a diagnosis of fracture of the neck of the femur.

1. The average shortening after fracture of the neck of the femur, as shown by the inside measurement, is about .62 of an inch; as shown by the outside measurement, is about .55 of an inch; and as shown by both measurements, is about one-half an inch, .58. 2. The greatest shortening was one inch and one-half—in Case V. 3. The least shortening was zero—in Case XVI; but in that case there was an actual shortening of three-fourths of an inch. 4. The average normal asymmetry of the lower limbs in the above twenty-one cases was .4 of an inch. 5. The average shortening of the measurement from the superior anterior spine of the ilium to the transverse-femoral line was about one-half inch, again showing that the top of the trochanter major is an approximately accurate point from which to measure. 6. In the four following cases the injured limb appeared to be shortened one-fourth of an inch by a comparison of the inside measurements.

In no case of fracture of the femoral neck do I use force to find crepitus. I consider the other evidences of fracture, such as I have above enumerated, as sufficient to come to a practical conclusion. Nor do I give an anæsthetic in order to make an examination. In this connection, I would make the following statements. 1. Moving the outer fragment when it is in contact with the inner fragment, will generally carry the inner fragment with it, and there will be no crepitus; and when there is impaction, ordinary manipulation will not cause crepitus to be felt. Yet crepitus may at times be felt, when there is impaction of the neck of the femur. 2. Moving the outer fragment when it is not in contact with the inner fragment, of course will not give crepitus. 3. Hence, unwarrantable force will be required in order to get crepitus in many cases of fracture of the neck of the femur. And more than this, an impacted fracture of the neck of the femur may be broken up by severe manipulation, and a patient who would have had a useful limb may be quite completely disabled for life; for an impacted fracture of the neck of the femur is the best setting of the bony fragments that the surgeon can have. 4. In a suspected case of fracture of the neck of the femur, I examine all the witnesses of fracture except crepitus; and if these witnesses agree substantially, I pronounce a verdict in favour of fracture of the neck of the femur. And if there be a doubt as to the correctness of such a verdict, I give the patient the benefit of that doubt, by treating the case as if there were fracture of the neck of the femur; and then the surgeon receives a benefit from that doubt. But if there be no fracture, the patient has had some days of needful rest, and has had a contused hip well treated.

GLUCK ON EXTIRPATION OF THE LUNG.

DR. TH. GLUCK publishes, in the *Berl. Klin. Woch.*, 1881, No. 44, a communication entitled an Experimental Contribution regarding the Question of Extirpation of the Lung. The *Cincinnati Lancet and Clinic* makes the following extract.

The author, basing his views upon successful experiments with animals in surgical affections of the lungs, recommends operative interference in man under the following considerations: 1, the use of anæsthetics; 2, the immediate effect of the operation (*a*) paralysis of the heart (shock), and (*b*) the occurrence of œdema of the lungs; 3, the consecutive dangers during the healing of the wound, (*a*) thrombosis, slipping of the ligature and secondary hæmorrhage, (*b*) pericarditis and pleuritis of the opposite side; 4, finally, the condition of the thorax upon the operated side, and its orthopædic treatment.

He first studies the question of œdema of the lungs, calling attention to the fact that the experiments of Cohnheim and Welch have proven that it may be produced by ligation of the great arterial trunks when it occurs as a result of stagnation of circulation (*Stauungs-œdem*), but showing also that any serious stagnation only occurs in the lungs under enormous obstacles in the course of the greater circulation. It is only when the aortic arch is blocked between the trunk of the innominate and the left subclavian, and two branches of the innominate artery are closed, that is, when the only escape tube from the aorta (except the coronary arteries) is formed by one carotid or the right subclavian, that *Stauungs-œdem* of the lung regularly occurs. Experiments in the way of blocking the flow from the pulmonary veins into the left ventricle have shown that, while it may produce œdema of the lungs, nevertheless, the block must be very great; that, in

fact, nearly every venous branch must be blocked before œdema occurs, and that it is only under this immense resistance that the pulmonary artery suffers any degree of pressure. Pulmonary œdema occurs, according to the author, when, after paralysis of the left ventricle, the right ventricle continues to act, and this left-sided paralysis constitutes, therefore, the efficient cause of œdema pulmonum.

Before the author undertook to cut out a lung, he tied the root of the lung in a whole series of animals. Under these circumstances, he never saw œdema of the intact lung as caused either by collateral hyperæmia, or by processes of inflammation. In no case did there form a parietal thrombosis of the heart, an absolutely necessary condition for the continuance of the circulation. Under antiseptic surroundings and least possible injury, the wound healed by first intention. Sudden death occurred twice, by arrest of the action of the heart. These were cases in which the ligature was applied too near the heart, so that a part of the heart itself and phrenic nerve were caught in it. No other animal succumbed to the immediate effect of the operation. In several rabbits which died six to eight weeks after the operation, the ligatured lung was found as a cheesy mass in the thorax. Necropsy revealed the interesting fact that in these cases the tied vessels had closed by first intention. One of the largest rabbits still runs about in the best of health, and a year has lapsed since the ligature of the root of the right lung.

After these observations, Gluck determined to extirpate the lung; and he undertook it after free section of the ribs in order to lay bare the root of the lung, so that deep sutures might be applied and the capacity of the thorax be reduced as much as possible. His experiments showed that œdema of the lungs and thrombosis of the heart were not to be feared, even with the weakest animals. Slipping of the ligature was also a groundless fear. Of course antiseptic precautions, least possible tearing and crushing of the parts, as well as careful arrest of the hæmorrhage, were necessary pre-requisites to success. The experiment was made on twenty animals, six dogs and fourteen rabbits. The animals withstood the attack very well, and in no case was there subsequent hæmorrhage. Between the seventh and tenth days, a few of the rabbits died of pericarditis and pleuritis, with abundant fibrinous exudation. On the other hand, the author possesses still a couple of rabbits, in one of which the wound of operation after extirpation of the left lung healed without reaction in ten days. There was never dyspnœa or other symptom of disease. The animals are now, after the lapse of three months, perfectly healthy. The author emphasises the fact that the after-treatment and nourishment, in such delicate animals, deserve the greatest consideration. They alone guarantee almost absolute assurance of success in the healing of the wound.

The operator describes the procedure in detail. Under anæsthesia with chloroform in dogs (rabbits were not anæsthetised) the side of the thorax is shaven and disinfected. A curved incision with the convexity towards the sternum (from the third to the sixth rib) penetrates the skin and the muscles of the chest. These soft parts are now held apart with sharp hooks. The broad points of origin of the great anterior serratus are now detached, and the third, fourth, and fifth ribs are resected under the periosteum outside of the track of the internal mammary artery, which, arising from the subclavian artery 7 to 14 millimètres distant from the border of the sternum, runs immediately behind the cartilages of the ribs. In rabbits, the incision need be but 4 to 6 centimètres long; in dogs, 6 to 10 centimètres. The intercostal muscles are likewise cut away. The slightest hæmorrhage is carefully checked. The pleura is now exposed intact, and, under it, may be seen the respiratory movements of the lungs and diaphragm. The pleura is now incised between two pairs of forceps, along the whole length of the wound, parallel with the sternum. At this moment the lungs collapse, and respiration becomes more frequent. Now, either the root of the lung is tied *en masse* (bronchus, pulmonary artery and vein, lymph-vessels, bronchial nerves and vessels), or one lobe of the lung after another is successively extirpated. The pulmonary stump left does not usually undergo aseptic necrosis and mummification, but continues to live like the ovarian pedicle, and takes active part in the processes of cicatrisation.

After extirpation of the lung, are exposed to view the whole contents of the mediastinum, the posterior pleural space, the trachea, the œsophagus, the two pneumogastrics, the azygos and hemiazygos veins, the thoracic duct, all surrounded by loose connective tissue; likewise, the heart and the great vessels which run to it and from it; lastly, the space called usually the anterior mediastinum.

Now follows punctilious toilette of the excavated chest. Here there occurred at times a singular phenomenon. The animals were seized with sharp dyspnœa and cyanosis of the visible mucous membranes. But the breathing became normal at once, so soon as the cavity of the thorax was carefully closed and reduced as much as possible.

Gluck performed the operation in exactly the same way on three human cadavera. Of course, in operations on man, provision must be made for drainage at the deepest parts.

The author alleges that extirpation of the lung in rabbits is indisputably followed by permanent cure.

The following conditions would justify the operation in man; abscess of the lungs, gangrene of the lungs, bronchiectatic and phthisical cavities, tumours and injuries of the lungs. What effect this operation is to have in the treatment of phthisis pulmonum, is not yet to be determined. Medical literature shows numerous cases in which puncture and incision of superficial cavities have peen performed. Moreover, a French surgeon once put a ligature about a small hernia of the lung and successfully removed it. Gangrene and abscess have been likewise treated expectantly. Ichorous pleurisy is treated by resection of the ribs, disinfection, and drainage, without regard to radical cure.

The author concludes with the following theses. 1. Ligature, as well as extirpation of a lung, is extraordinarily well endured by rabbits. 2. Careful after-treatment under asepsis secures a permanent healing of the wound. 3. The vessels heal by first intention under this treatment; there develops no parietal thrombosis of the heart. 4. The pulmonary pedicle does not suffer necrosis, but takes active part in the solidification of the cicatrisation. 5. Secondary hæmorrhage from slipping of the ligature has never been observed. 6. In fatal cases, death was caused by pericarditis and pleuritis of the intact side; but even in these cases there was no parietal thrombosis of the heart.

BULL ON THE OPERATIVE TREATMENT OF DISEASES OF THE LUNGS.

Dr. Edward Bull of Christiania has published in the *Nordiskt Medicin. Arkiv*, Band xiii, Häft 3, an interesting contribution to the literature of surgical interference in certain diseases of the lung. He is convinced that in this matter medicine will gain much from surgery, when sufficient material has been collected to allow rules to be laid down as to the conditions in which the operation should be performed. He relates two cases which came under his care in the hospital at Christiania.

The first case was one of gangrene of the lung in a female servant aged 23. In November 1880, she had putrid bronchitis; and, in the middle of December, infiltration limited to the anterior part of the upper lobe of the left lung. She was admitted on December 30th. On January 2nd, 1881, there was tenderness without redness or swelling, limited to a circumscribed spot in the fourth intercostal space, outside the nipple. On the 4th, effusion in the lower and posterior part of the left pleura commenced, and steadily increased. An exploratory puncture made on the 8th in the fifth intercostal space yielded serum, containing a considerable quantity of blood and numerous round cells. On January 19th, the pleural effusion had greatly diminished. Anteriorly, the percussion-sound was dull from the lower edge of the second left rib to the fifth, between the sternum and the axilla. Strong percussion over the tender spot yielded a cracked-pot sound, accompanied by gurgling. The sputa were gangrenous. An exploratory puncture over the tender spot gave exit to a sanguineo-purulent offensive fluid; while a puncture below the left angle of the scapula yielded clear yellow serum—the product of the pleural effusion.

The case was thus one of circumscribed gangrene of the upper lobe of the left lung, lying very near the thoracic wall, with coincident pleuritic effusion; the two being completely separated by pleural adhesions. On January 20th, there was infiltration around the point in front where the puncture had been made; and the skin of the left side of the chest as far as the neck was œdematous. On the 24th, an incision 3 centimètres (1.2 inches) long was made, and behind the nipple was found a cavity containing two or three tablespoonfuls of fœtid pus. The base of this cavity was formed by the fourth and in part by the third and fifth intercostal spaces; and, at the bottom of the cavity, the beat of the heart could be observed. An incision 1 centimètre long was made with a blunt forceps in the fourth intercostal space, just outside the apex of the heart; and through this opening broken up spongy tissue could be felt with the finger. The part was carefully washed out with carbolised water, and a drainage-tube was inserted. In the evening, there was some hæmoptysis. After this, the patient's condition improved rapidly for some days; the sputa were diminished in quantity, and inodorous; the discharge from the wound was slight. Then followed again some hæmoptysis, with considerable pyrexia, and infiltration in the posterior part of the left lung, and the sputa again became fœtid. In the middle of February, she was convalescent; and, after remaining at rest in the country through the summer, returned to her duty in good health in the autumn.

In contrast to this case, Dr. Bull relates the following. A woman, aged 54, of feeble constitution, had, on April 2nd, 1881, pleuro-pneumonia of the lower lobe of the right lung; and, on the 6th, there was infiltration of the upper lobe of the left lung. On the 13th, the sputa began to be fœtid. Doubtful physical signs of a cavity in the anterior part of the upper lobe of the left lung were developed. In the night of May 10th, the patient awoke suddenly with a feeling of suffocation, and, after expectorating a large quantity of fœtid pus, rapidly died. At the necropsy, the left lung was found to be adherent to the pleura through its whole extent. Immediately beneath the pleura, separated from it only by a thin layer of lung-tissue, was found a cavity between the first and third intercostal spaces, containing fœtid sanguinolent pus. An abundant quantity of the same substance was also found in the pharynx, larynx, trachea, and large bronchi. Dr. Bull remarks that an operation would have been easily performed in this case, and would at least have prolonged life for some time. The layers of the pleura were adherent, and the abscess was comparatively superficial. The question of operating was discussed; but there appeared to be no immediate danger, and the diagnosis was somewhat obscure; the abscess-cavity, which was nearly full, giving no distinct signs. An exploratory puncture would have aided the diagnosis, and would have been made if the patient had not unexpectedly died.

The literature of the subject, Dr. Bull remarks, is as yet very scanty. Even in such recent works as Ziemssen's *Handbuch der Speciellen Pathol. und Ther.*, Gerhardt's *Handbuch der Kinderkrankheiten*, and Leyden on Pulmonary Gangrene and Pulmonary Abscess in Volkmann's *Sammlung Klinischer Vorträge*, there is no mention of the possibility of operative treatment of diseases of the lung. A Polish author, L. Radek, has described the case of a man, aged 44, who was brought into hospital suffering severely from dyspnœa. Two large communicating abscesses were found in the neighbourhood of the right nipple. When pressure was made on them, the dyspnœa was increased and pus was expectorated. The case was, however, believed to be one of empyema communicating with a bronchus. An incision was made, and a large quantity of pus escaped; the cavity was washed out with carbolic acid. Relief followed for twelve hours; but, after this, acute pleuritis of the left side set in, and the patient soon died. The necropsy showed that there was no empyema, but a large abscess of the lung.

Dr. Bull refers also to the papers on operative treatment of diseases of the lung published in English medical journals by Dr. Theodore Williams, Dr. Cayley, Mr. Johnson C. Smith, Dr. Douglas Powell, and Mr. Lyell. [Connected with these is also the case of Dr. Fenger. *See* London Medical Record, August 15th, 1881.]

The author makes the following comments on the artificial puncture of a pulmonary fistula. The pathological changes in the lung which may indicate such an operation, are cavities of all kinds; such as limited gangrenous foci, pulmonary abscesses, phthisical and bronchiectatic caverns. The first two may be completely healed if the loss of substance be not too great and if the remaining parts of the lung be sound or capable of healing; with large cavities, a permanent fistula perhaps cannot be always avoided. Life may be preserved for a long time in cases of considerable gangrene and of large pulmonary abscesses in many cases, where a pus-secreting permanent cavity is periodically emptied by coughing.

It must, however, be distinctly better for these patients that the cavity should have an opening of discharge through the chest-wall, and that the air-passage should remain free; the constantly threatening decomposition of the contents of the cavity can thus be best obviated. Both gangrene and abscess of the lung may indeed heal without operation; but Dr. Bull is of opinion that an operation should be performed whenever possible. Delay only reduces the patient's strength, and favours the extension of the local disease. Even if death should at last follow the operation, it would still be a palliative measure.

Phthisical and bronchiectatic cavities are probably less often amenable to surgical treament, and the indications for operation are much more difficult. As in such cases there are usually several cavities, and, in addition, a progressive constitutional disturbance, one or two openings in the chest-wall can scarcely be of much advantage; it is only in single large cavities with stagnating contents, the evacuation of which by coughing distresses the patient, that an operation can be of use. In cases of phthisical cavity, a permanent fistulous opening must be expected; in bronchiectasis, the operation may be followed by obliteration of the cavity and radical cure.

In order that pulmonary cavities may be capable of being operated on, they must, Dr. Bull says, be superficial; the situation of deeply seated cavities cannot be determined with sufficient accuracy, and they cannot be reached without danger. Adhesion of the pleura over the cavity is evidently of the greatest importance; but it may be difficult to ascertain whether such adhesion exists. [Fenger and Hollister recommend the introduction of a needle as a means of diagnosis; if there be adhesions, it is unaffected by respiration; if no adhesion exist, it is moved synchronously with the breathing.] If the disease be not running a very rapid course, adhesion may be waited for. When the course of the disease is rapid, especially in gangrene, the surgeon must expect to find the pleural cavity open. Dr. Bull does not find in this an absolute contra-indication to operation when danger to life is imminent. He advises that in such cases an opening should be made in the chest-wall over the cavity; if adhesions be altogether wanting, pneumothorax follows; and if then the gangrenous cavity burst into the pleural sac, a counter-opening must be made, and the case treated as one of empyema. If there be pleural adhesions, but not over the cavity, a cannula may perhaps be introduced into the diseased portion of lung and allowed to remain there; if this fail, the case must be managed on the principles of operation for empyema.

When the pleura is adherent, the operation is simple. An exploratory puncture is usually free from danger; in cases where a cavity is distended with fluid, puncture is absolutely necessary: in empty cavities, the aspiration-syringe will draw off gases, perhaps having a fœtid odour. When adhesion is absent, or where its presence is uncertain, and there is no danger in delay, an attempt may be made to produce adhesions by perforating the chest-wall with caustics.

Rigorous antiseptic proceedings during operation appear to Dr. Bull unnecessary, inasmuch as it is not possible to prevent the air of the room from entering through the air-passages. Irrigation of the cavity must be done very carefully, so as not to produce either irritation or hæmorrhage. Caution is also necessary in the use of drainage-tubes, especially in gangrene of the lung, where frequently there is no special cavity, but only a mass of more or less broken up lung-tissue. In chronic phthisical caverns and abscesses, on the other hand, there is generally a cavity into which the drainage-tube may be inserted. Resection of a rib may be sometimes necessary in order to render falling in of the chest-wall possible; just as in empyema.

Dr. Bull believes that the time is not distant, when the formation of an artificial fistulous opening will be regarded as a legitimate, though rarely indicated, operation in diseases of the lung.

A. Henry, M.D.

HERING ON EXPLANATION OF COLOUR-BLINDNESS ON THE THEORY OF ANTAGONISTIC COLOURS.*

Hering considers every sensation of light and of colour to be produced by a combination of the six elementary sensations, black, white, blue, yellow, green, and red; white and black represent the series of colourless perceptions.

The tone of any colour which does not correspond with one of the four elementary colours, red, green, yellow, and blue, is the result of the relative distinctness in it of two of these elementary colours. Neither red and green, nor yellow and blue, can ever be distinct at the same time. He calls two such colours as are never distinct in the same visual perception, antagonistic colours.

Saturation is the degree of purity and distinctness with which the colour proper stands out from the rest of the perception. *Shading* means the more or less distinct mixture of the colour with the colourless sensations (white and black).

In the visual substance (*Sehsubstanz*) there occur six quantitatively distinct processes of unknown nature, corresponding to the six simple or elementary sensations. Every visual sensation is a mixture of the six elementary sensations, but only some of these are distinct in it; more than four are never perceptible at once, viz., two coloured, combined with black and white.

By the term white value (*Valenz*) of the rays of light, Hering understands their power of causing the sensation of white. In the spectrum, this is greatest in the rays corresponding to the neighbourhood of the yellow. Besides this value, which is common to all rays of light, different colour-values belong to the different kinds of rays. The spectrum is divided by the primary green into two halves, in one of which, yellow, and, in the other, blue is the dominant colour; the former, or yellow half, is again divided by the primary yellow into a reddish-yellow and a greenish-yellow part; while the second, or blue half, is divided by the primary blue into a greenish-blue and a reddish-blue. Of these four subdivisions of the spectrum, the first has a white, yellow, and red value, the white and yellow rays alone corresponding to the primary yellow; the second subdivision has a white, yellow, and green value, only the white and green corresponding to the primary green; the third has a white, green, and blue value, the primary blue rays only a white and a blue; the last subdivision has a white, blue, and red value. A primary or fundamental red does not

* Dr. Horstmann in *Cent. für die Med. Wiss.*, 1881.

exist in the spectrum, though the extreme red end makes the nearest approach to it.

Two homogeneous lights, both, for example, having a yellow value, but possessing it in different degrees, can be brought to the same value by increasing the light intensity of the weaker, and they are then equivalent. Two homogeneous lights of different wave-lengths have yellow equivalence when both cause the sensation of yellow with equal power, so that the one light can affect white and green, the other red and white.

Two homogeneous lights, of which the one affects yellow (or red) as powerfully as the other does blue (or green), so that both values cancel one another, are antagonistically equivalent. The idea of value and equivalence is just as applicable to mixed light as it is to homogeneous; so there is an equivalence for similar and for antagonistic colours.

According to the theory of the antagonistic colours, an eye with no perception of red has also no perception of green, and conversely. The same holds good for yellow and blue. In the former case, therefore, the eye is red-green blind; in the latter, blue-yellow blind; total colour-blindness exists when all visual sensations are confined merely to the black and white. Helmholtz explains this latter condition by the absence of two of the three kinds of fibres described by him for red, green, and violet. Such an individual, then, sees everything either red, green, or violet.

A case of unilateral colour-blindness, observed by Becker, saw with the affected eye everything colourless; the spectrum was not shortened, and the brightest spot lay as in the normal eye, *i. e.* neither in the red, green, nor violet, but in the yellow.

Since the examination of acquired colour-blindness, as well as a reference to the normal colour-blindness of the retinal periphery, contradict the theory of Helmholtz, this author is obliged to look for a further hypothesis, as follows. In the totally colour-blind eye three sorts of fibres exist, yet these are always equally strongly stimulated by all kinds of rays, so that the impression of white must always be produced.

The spectrum of the red-green blind breaks up into a yellow and a blue half, which are only distinguishable from one another by difference in shading, from the relative proportions of black and white light, and not by difference of colour-tone. The colourless part does not always lie at the same spot, and on its situation depends the length of the entire spectrum, which sometimes appears shortened. To the red-green blind every light of greater wave-length than that of the colourless part appears yellow; every light of shorter wave-length appears blue; there is never an intermixture of the two colours, in which sometimes blue, sometimes yellow, predominates.

According to Helmholtz's theory, there exist a red-blindness and a green-blindness. In the latter, only the red and violet precipient fibres are in operation; white, yellow, and blue sensations do not occur. The spectrum consists of a red and a violet half. In red-blindness, only the green and violet fibres are in operation. The spectrum consists of these two colours, and is shortened at the one end.

Hering is of opinion that the phenomena of red-blindness are readily explained by his own theory, while they are frequently irreconcilable with that of Helmholtz.

R. MARCUS GUNN.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. LATHAM.—Salicylic Acid as a Specific in Acute Rheumatism. (*Brit. Med. Jour.*, Jan. 1882, p. 46.)
2. SCRIVEN. — The Hypodermic Use of Quinine. (*Lancet*, Dec. 1881, p. 1122.)
3. STIRLING.—Eucalyptus Oil in Lumbago. (*Lancet*, Dec. 1881, p. 1155.)
4. ORTON.—Local Application of Salicylate of Soda in Acute Rheumatism. (*Brit. Med. Jour.*, Jan. 1882, p. 11.)
5. COUPLAND.—Salicylate of Soda in Acute and Sub-Acute Rheumatism. (*Lancet*, Jan. 1882, p. 9.)
6. HOOD.—Salicylates in Acute Rheumatism. (*Lancet*, Dec. 1881, p. 1119)
7. BRAUN.—Podophyllotoxine. (*Archiv für Kinder.*)
8. KAUFMANN.—The Action of Digitaline on the Cardiac Rhythm. (*Lyon Méd.*, May 15, 1881.)
9. ARCHAMBAULT.—The Application of Blisters to Children. (*Jour. de Méd. et de Chir. Pratiques.*)
10. BARUCH.—Treatment of Carbuncle. (*Amer. Med. Bi-weekly*, Dec. 3, 1881.)
11. SKENE.—The Treatment of Cystitis. (*Cincinnati Lancet and Clinic.*)
12. MARTIN, J. C.—Gossypium Herbaceum. (*American Jour. of Med. Science*, Jan. 1882.)
13. ROE.—Boracic Acid in Gonorrhœa. (*Michigan Med. News.*)
14. Treatment of Infantile Eczema. (*Gaillard's Med. Jour.*)
15. SEGUIN.—The Efficacy of Potassium Iodide in Non Syphilitic Diseases of the Nervous System. (*New York Hosp. Neurological Soc.*)
16. VON JAKSCH.—The Therapeutic Value of Chinoline. (*Prager Med. Woch.*, Nos. 24 and 25, 1881.)
17. HOFMANN and SCHÖTENSACK. —On Chinoline. (*Pharm. Zeitung*, No. 84, 1881.)
18. KUPKE.—On Chinoline. (*Allgem. Med. Central-Zeitung*, No. 8, 1882.)

1. *Latham on Salicylic Acid as a Specific for Acute Rheumatism.*—In the *Brit. Med. Jour.*, Jan. 1882, p. 46, Dr. P. W. Latham asks, Is salicylic acid a specific for acute rheumatism? and gives a short summary of his theory of the pathology of acute rheumatism. 1. A nervous centre exists, which controls the nutrition of the muscular and other tissues, and which has been termed the 'inhibitory chemical centre'. 2. The action of cold, lowering the power of this centre, may modify the nutrition of the tissues and lead to excessive formation of lactic acid and other products. 3. The presence of lactic acid, in abnormal amount, produces function changes in these nerve-centres, and develops symptoms of acute rheumatism, similar to the production of symptoms in locomotor ataxy, with its joint-affections, by organic changes. 4. If portions of the vagus be involved, then cardiac, pulmonary, or pleuritic complications may develop. 5. Salicylic acid combines with the antecedents of lactic acid, and so prevents its formation. 6. If the remedy be discontinued too early, a relapse will certainly take place. As much of the remedy should be given from the first as can be borne, and great care must be taken to secure a pure form of the salicylic acid; that which is artificially prepared is often dangerous to administer, while pure acid seldom causes unpleasant symptoms.

2. *Scriven on Hypodermic Use of Quinine.*—Mr. J. B. Scriven, in the *Lancet*, Dec. 1881, p. 1122, still claims for the tartrate of quinine all the advan-

tages that he found it possessed in 1876 (vide *Lancet*, vol. i, 1876, p. 650).

3. *Stirling on Eucalyptus-Oil in Lumbago.*—Mr. B. A. Stirling, in the *Lancet*, Dec. 1881, p. 1155, speaks highly of the value of eucalyptus-oil in lumbago. Mr. Stirling believes that, by the free inunction of this agent, he has also often cut short a bronchial attack. The formula advised is, equal parts of the oil of commerce, olive-oil, and belladonna liniment.

4. *Orton on the Local Application of Salicylate of Soda in Acute Rheumatism.*—In the *Brit. Med. Jour.*, Jan. 1882, p. 11, Dr. Chas. Orton states that a solution of salicylate of soda, applied to the inflamed joints on lint covered with oiled silk, is followed by the most marked relief to the pains.

5. *Coupland on Salicylate of Soda in Acute and Subacute Rheumatism.* — Dr. Sidney Coupland, (*Lancet*, Jan. 1882, p. 9) concludes some very instructive remarks as follows. 1. In the majority of cases, the pyrexia and pain of acute rheumatism are speedily removed. 2. Unless the use of the drug be long continued, both the pyrexia and joint affection are liable to recur. 3. Such relapses cannot be wholly prevented, but are often due to indiscretions on the part of the speedily relieved patient. 4. The dose must be properly regulated and gradually diminished. 5. The drug does not definitely affect the cardiac complications. 6. The toxic effects are serious in proportion to the dose, and perhaps to the purity of the drug. Its alleged depressing effect upon the heart has yet to be proved. 7. Salicylate of soda is certainly antipyretic, and, to a considerable degree, antirheumatic. Although it does not lessen the duration of the disease, it yields the speediest relief of all drugs, and thus is the most valuable remedy for the disease yet known.

RICHARD NEALE, M.D.

6. *Hood on Salicylates in Rheumatic Fever.*—At page 1119 of the *Lancet* for Dec., Dr. Hood gives an analysis of 1,200 cases, which shows that, with salicylates, patients lose their pain sooner than those treated otherwise, but that relapse is more frequent, and stay in hospital is longer; while heart-complications are much the same under all treatments, and that, if any advantage can be claimed, it is not by the use of salicylate.

7. *Braun on Podophyllotoxine.*—Podophyllotoxine has not as yet come into use in this country, but new remedies, or new forms of old ones, are constantly appearing, and it is sometimes important to know the doses of such preparations. Dr. Braun (*Archiv für Kinderh.*) gives the dose as $\frac{1}{60}$ to $\frac{1}{30}$ of a grain for a child under twelve months old, up to four years, $\frac{1}{30}$ to $\frac{1}{15}$, and, above that, $\frac{1}{6}$ to $\frac{1}{8}$ of a grain. The most convenient mode of administration is a solution made by dissolving 1 grain in about 2 drachms of rectified spirit. Two to ten drops are given in a teaspoonful of syrup. Podophyllotoxine, which is prepared from the chloroformic extract of the root, is said to be more certain in its action than podophylline.

8. *Kaufmann on the Action of Digitaline on the Cardiac Rhythm.*—M. Kaufmann has made some fresh experiments with digitaline on the heart, and the conclusions to which his reseaches led him are as follows (*Lyon Méd.*, May 15, 1881). 1. The inhibitory fibres of the heart are paralysed by digitaline, since, under its influence, these fibres, when they are excited, lose the property of arresting the pulsations of the heart. 2. This paralysis reaches the peripheric extremities of the peripheric end of these nerves, which is no longer excitable. 3. The acceleration of the pulsations of the heart becomes more and more evident, in proportion as the excitability of the inhibitory nerves diminishes. 4. The acceleration reaches its maximum at the moment when the excitability is destroyed, and it must consequently be attributed to the gradual paralysis of the peripheric extremities of the inhibitory nerves of the heart. 5. Very small doses of digitaline produce a long-continued retardation, whilst large doses immediately produce acceleration without preliminary retardation. 6. The inhibitory fibres, paralysed by digitaline, recover their excitability in proportion as the poison becomes eliminated. In conclusion, M. Kaufmann points out that a practical indication may be drawn from these conclusions; viz., that when, for therapeutic purposes, it is desired to retard the pulsations of the heart, we should use very small doses of digitaline. Thus retardation is obtained without intense consecutive acceleration.

9. *Archambault on the Application of Blisters to Children.*— Dr. Archambault, in a lecture reported by M. Paul Lucas-Championnière, in the *Jour. de Méd. et de Chir. Pratiques*, remarks that the utility of blisters for children is often doubtful. Even when it is thought necessary to have recourse to this violent means, their application should be carefully superintended; and, if too prolonged, they may bring on a true burn of the third degree and nervous symptoms, notably convulsions, such as have been noted by Graves and others. For a child a year old, it is sufficient to leave the blister on during one or two hours at most. For a child four or five years old, an application for about four hours is always sufficient. If, when the blistering plaster is removed, no vesicle be formed, it suffices to apply an emollient poultice to produce one speedily. Finally, to prevent the accidents which may supervene with respect to the vesicles, care must be taken, according to Bretonneau's practice, to interpose a layer of oiled silk between the plaster and the skin, both in children and in adults. There are a certain number of contra-indications to the application of blisters. Emaciated children, reduced to a cachectic condition by long-standing suppuration, or predisposed to cutaneous eruption, should not, except under special circumstances, be submitted to blistering. On the one hand, it exhausts their remaining stock of strength; and, on the other, the local irritation set up by the blister may serve as a starting-point for an outbreak of eczema or impetigo. It is especially, however, in diphtheria that the use of blisters should be avoided. M. Archambault says that it cannot be too often repeated, that blisters should never be applied to diphtheritic patients, nor even to those suffering from attacks of which the diphtheritic nature is not absolutely demonstrated. This applies especially to false croup, in which blistering is not of the least utility. In fact, under these circumstances, the blister too frequently ulcerates, and becomes covered with diphtheritic products, which increase the gravity of the disease. Finally, in the eruptive fevers, especially measles, which predispose to gangrenous accidents, the use of blisters is contra-indicated. Blisters applied to the nape of the neck, with the intention of soothing insomnia, delirium, and restlessness, not only do not produce the effect required, but increase the evil. It will also be advisable not to have them applied on parts exposed to friction; they should be applied, by preference, on the anterior and lateral portions of the thorax. The wounds consequent on blisters may become inflamed, and then the denuded

surface should be covered with emollient poultices. If there be ulceration, the following lotion may be used advantageously: Decoction of cinchona, 500 grammes; solution of chloride of lime, 200 grammes. The diseased surface is afterwards powdered with quinine powder. The following ointment may also be useful in similar circumstances: Glycerole of starch, 30 grammes; red precipitate, 50 centigrammes. When the blister becomes coated with a greyish pellicle, somewhat of the appearance of hospital gangrene, an excellent plan is to cover the injured surface with a coat of plaster-of-Paris. It should not be forgotten that all these accidents are generally subordinate to a bad general condition, which must, therefore, be improved.

10. *Baruch on the Treatment of Carbuncle.*—Dr. S. Baruch of New York (*American Med. Bi-weekly*, Dec. 3, 1881) says that the carbolic acid treatment of carbuncle is of great value. Pure carbolic acid, liquefied and held in liquid form by a few drops of glycerine, is freely carried by a camel's hair brush into every open point, after the sloughing channel has been cleansed by a pointed tent of linen. This application must be made thoroughly, but very gently. The pain will not be severe, and its necessary daily repetition will not be dreaded by the patient. After this application, collodion is freely brushed, in three or more successive coats, over the entire diseased surface, even extending a few lines beyond the outline. A doubled piece of linen, having a central opening to admit the sloughing portion of the carbuncle, is now laid upon the collodion-covered surface. A light flax-seed poultice is placed over the former, and renewed several times a day. Tincture of chloride of iron and quinine, milk, and any nutriment the patient can be induced to take, should be freely administered. Anodynes should be prescribed whenever necessary, with a view to allay pain and prevent loss of sleep, but are rarely needed after the first day. If the case progress favourably, the collodion dressing is continued daily, but the carbolic acid may be omitted every other day.

11. *Skene on the Treatment of Cystitis.*—Dr. A. J. C. Skene of Brooklyn gives the following (*Cincinnati Lancet and Clinic*), which he regards as almost specific in its influence, especially in the earlier stages, affording rapid and lasting relief: ℞. Acidi benzoici, sodii biboratis, *aa* grs. x.; Infusi buchu, ʒij. This quantity is to be taken three or four times a day. The diet should also be regulated, and the skin and bowels kept in an active condition.

12. *Martin on Gossypium Herbaceum.*—The following are the results of a series of experiments upon the physiological action of this drug, by Dr. J. Charles Martin (*Amer. Jour. of Med. Sci.*, Jan. 1882). With frogs, a large amount of the drug was necessary to produce definite results, 20 to 30 minims of the fluid extract being required. Stupor, inattention to surrounding objects, lowered perception of impression, and diminished muscular activity were the prominent symptoms developed. Nerves, such as the sciatic, preserved their irritability, as did the muscles also. Sensibility was only gradually lost as larger amounts were given. Reflex action was not destroyed, and there was no change in the cardiac function, neither depression nor stimulation. When similar injections were made in frogs, the spinal cords of which were divided, and the sciatic nerve on one side of each isolated by tying all the tissues, reflex functions, motility, and sensibility, were found to be unimpaired, and were exactly the same in each limb. Therefore it is concluded that the stupor noted in the former cases was due to the cerebral effect of the drug. Experiments upon pregnant rabbits, which usually conceive and abort with equal facility, showed no effect from the medicine upon the uterus. Even toxic doses produced no hyperæmia or other effect on this organ. The symptoms manifested were gradually increasing stupor, and in the same ratio impairment of motility and sensibility.

13. *Roe on Boracic Acid in Gonorrhœa.*—Dr. A. J. Roe (*Mich. Med. News*) says he has treated a great many cases of gonorrhœa by means of boracic acid injections, and his results are very satisfactory. He employs the acid in the strength of 10 grains to the ounce of water, morning and evening, after urinating. This treatment usually allays the inflammation, and relieves the pain and chordee, inside of thirty-six hours, and complete cure is generally effected inside of a week or ten days.

14. *Treatment of Infantile Eczema.*—The following mixture is said to have been found very beneficial in the treatment of this affection, viz.: Oil of cajuput, one drachm, combined with one ounce of zinc ointment. Dr. Claiborne of Virginia (Gaillard's *Med. Jour.*) discovered its value through a mistake by his druggist, who put it up in a mixture instead of oil of cade, which was ordered. It cured the patient, and many others since.

15. *Séguin on the Efficacy of Potassium Iodide in Non-Syphilitic Diseases of the Nervous System.*—Dr. Séguin read a paper on this subject at a recent meeting of the New York Hospitals Neurological Society, and stated that the mere fact that iodide of potassium was of service in nervous affections did not prove the latter to be of syphilitic origin. He related three groups of cases, the first of which consisted of instances of organic or 'coarse' cerebral disease. One of these occurred in a boy aged 9, in whom eventually a sarcomatous tumour was found pressing on the left crus cerebri and left side of the pons. The symptoms had been, first, paresis, and afterwards paralysis of the right arm, also of the sixth cranial nerve, staggering gait, and optic neuritis. Blisters behind the ear and iodide apparently did good, although we must not lose sight of the fact that cerebral tumours occasionally make remissions of symptoms without any treatment. In the second case, likewise that of a boy, a fibro-sarcomatous tumour was found in the cerebellum, and had pressed on the venæ Galeni, causing hydrocephalus and separation of the lambdoid and sagittal sutures. The tumour could, during life, be felt in the right occipital region, and pulsated synchronously with the heart. There were exophthalmus, choked disc, and feeble gait, but no paralysis. The patient improved under large doses of the iodide (90 to 150 grains *per diem*), but died some months afterwards. In another case of cerebellar tumour, a remission occurred which lasted four years. The cases of the second group were one of hemi-paræsthesia, which was cured by the iodide, but the patient afterwards died of paralytic dementia; another of paralysis of the third cranial nerve, with ataxy of the limbs, in which some improvement appears to have taken place at first, while latterly it was but slight; and one of right hemi-epilepsy with aphasia, which recovered in two months under the influence of the iodide. The cases of the third group were all of basilar meningitis, and recovered under the same treatment. Dr. Séguin claimed them as non-tubercular, although one had a suspicious history, one brother having died of phthisis, and another brother of brain-fever. In the discussion which followed, most of the

speakers corroborated the benefit of the iodide in non-syphilitic cases, Dr. Amidon considering that in tumour, not the neoplasm itself, but the circulation in its neighbourhood, was influenced by the drug.

JULIUS ALTHAUS, M.D.

16. *Von Jaksch on the Therapeutic Value of Chinoline.*—Referring to the statements of Donath (see LONDON MEDICAL RECORD, Feb. 1882), Dr. von Jaksch says (*Prager Med. Woch.*, Nos. 24 and 25, 1881) that he has given the hydrochlorate of chinoline in typhus and intermittent fevers, as well as in tuberculosis, pneumonia, and erysipelas of the face; and that he finds its antipyretic action to be very inferior to that of quinine, while its taste is very disagreeable, and its administration is very often followed by vomiting. It was useful in two cases of intermittent fever; and, in this disease, it is worth while to make further research as to its efficacy.

17. *Hofmann and Schötensach on Chinoline.*—These authors (*Pharm. Zeitung*, No. 84, 1881), also refer to Donath's article, and add that very favourable results were obtained from the use of chinoline by Dr. L. Löwy, in forty cases of intermittent fever and intermittent neuralgia (*Wiener Med. Presse*, No. 39, 1881). Independently of Dr. Donath, Dr. Salkowsky of St. Petersburg made experiments with chinoline in the military hospital of that city, and found that, while it did not lower the temperature more than quinine, it was very useful in intermittent fever. Hofmann and Schötensach recommend for use tartrate of chinoline, of which from half a gramme to a gramme (about 7½ to 15 grains) may be given to adults twice daily. In intermittent diseases, a gramme should be given three hours before the attack, for two or three times, either made up into a bolus or lozenge, or dissolved in 50 grammes each of distilled water and raspberry syrup, with from 1 to 3 grammes of cherry-laurel water. To allay the vomiting which sometimes occurs when the stomach is irritable, a little lemon-juice or a piece of ice may be given after each dose of the chinoline. Chinoline is very useful in the case of children, on account of the bitter taste of quinine. Children from four to eight years old may take half the dose for an adult, in solution; and any unpleasant taste may be masked by means of simple surup. In dentistry, chinoline, dissolved in ether or in alcohol, is an useful antiseptic in caries of the teeth. In ulcerative processes of the mouth, especially of the gums, the following mouth-wash is strongly recommended: Tartrate of chinoline, 1 gramme; distilled water, 140 grammes; rectified spirit of wine, 20 grammes; oil of peppermint, 1 drop; to be mixed, and diluted with from 5 to 8 times as much water when used. Still more diluted (one teaspoonful to a wineglassful of water), it forms a pleasant and refreshing hygienic mouth-wash.

18. *Kupke on Chinoline.*—Dr. Kupke of Posen (*Allgemeine Med. Central-Zeitung*, No. 8, 1882) gives the result of his experience with chinoline. He administered it successfully in eight cases of intermittent fever, one of diphtheria, one of enteric fever, and one of intermittent neuralgia; it seemed, also, to be useful in two cases of anæmia and nervous exhaustion. In addition to being cheaper than quinine, it has, he says, the advantage of not producing disagreeable after-symptoms, such as noises in the ear, deafness, and vertigo. One salt only—the tartrate—is to be recommended for medical practice, on account of its solubility in water and its freedom from disagreeable taste.

A. HENRY, M.D.

MEDICINE.

RECENT PAPERS.

1. DÉJÉRINE.—Anæsthesia in Ataxy. (*Le Prog. Méd.*, No. 8, 1882.)

2. PETRES.—Loss of the Nails in Ataxy. (*Le Prog. Méd.*, No. 8, 1882.)

3. BOUCHERON.—On Uricæmia. (*Gaz. Hebd. de Med. et de Chir.*, Sept. 1881.)

4. PENKERT.—Miasmatic Pneumonia. (*Jour. de Méd. et de Chir. Prat.*, Feb. 1882.)

5. BROWN-SÉQUARD and CHARCOT.—Paraplegia in Hæmoptysis. (*Le Prog. Méd.*, No. 4, 1882.)

6. CHARPENTIER.—Myxœdema. (*Le Prog. Méd.* No. 5 1882.)

7. HEWITT.—Contagion carried by Domestic Animals. (*Jour. of Compar. Med.*)

8. NORMANN.—Death from Ascaris Lumbricoides in the Air-Passage. (*Norsk Magazin fur Lägevidensk.*; and *Nord. Med. Arkiv*, Band xiii.)

9. TUCZEK.—A Case of Objective Tinnitus Aurium causing Melancholia. (*Berl. Klin. Woch.*, No. 30, 1881.)

10. TAYLOR. — Amygdalotomy and Suicide. (*Med. Times and Gaz.*, Dec. 1881, p. 758.)

11. HUTCHINSON. — Certain Rare Cases of Chronic Rheumatism in which parts suffered that are usually attacked only in Gout. (*Med. Times and Gaz.*, Dec. 1881, p. 757.)

12. DRUMMOND.—Diffused Hepatic Aneurism causing Fatal Intestinal Obstruction. (*Brit. Med. Jour.*, Dec. 1881, p. 1066.)

13. WILKS.—Ulcerative Endocarditis or Arterial Anæmia. (*Brit. Med. Jour.*, Jan. 1882, p. 39.)

14. KULENKAMPFF.—A Case of Nerve-Stretching in Locomotor Ataxy. (*Berl. Klin. Woch.*, No. 48, 1881.)

1. *Déjérine on Anæsthesia in Ataxy.*—M. Déjérine (*Le Prog. Méd.*, 1882, No. 8), having found that cases of ataxy, with and without anæsthesia, presented the same lesions of the spinal cord, sought its explanation elsewhere. He has found that the nerves of the anæsthetic regions present atrophy of the nerve-tubes, while many of the sheaths are completely empty; and he is of opinion that this degeneration is peripheral in its origin.

2. *Pitres on the Loss of the Nails in Ataxy.*—M. Pitres (*Le Prog. Méd.*, 1882, No. 8) refers to the notice in M. Arloing's recent thesis that M. Joffroy had observed the spontaneous loss, without traumatic cause, of the nails of the great toes in an ataxic patient, and adds to this two similar observations from his own practice. The nails were lost and grew again in each case several times. The occurrence was preceded for some weeks by a dull pain and a sensation of throbbing in the great toe. There was no suppuration or apparent ulceration of the matrix, and the nails were rapidly replaced by new ones of normal conformation.

3. *Boucheron on Uricæmia.*—Dr. Boucheron has communicated a paper to the Académie des Sciences (*Gaz. Hebd. de Méd. et de Chir.*, Sept. 2, 1881) on the presence of uric acid in the blood, which he asserts to be a very frequent condition, and the cause of a very large number of diseases. For its detection, he recommends the examination of the saliva. One or two grammes of saliva should be dried in a capsule without boiling or so much heat as to turn it yellow, and when it is dry, a rod dipped in nitric acid should be passed lightly over the deposit, and followed immediately by a rod dipped in ammonia. He thinks this murexide test more delicate

and less liable to fallacy than the method of crystallisation.

4. *Penkert on Miasmatic Pneumonia.* — Penkert has published, in the *Berl. Klin. Woch.* (*Jour. de Méd. et de Chir. Prat.*, Feb. 1882) the following account of an epidemic of pneumonia attacking forty-two persons out of a little village of 700 inhabitants in the space of two months, from March 11th to May 14th. The twelve first attacked were children attending the same school. The village consisted of a single steep street, at the bottom of which stood the school-house, opposite the new cemetery, and separated from it by a little lake; the two latter were in a line north-west from the school-house. At the time of the outbreak, and for some days previously, the wind had been north-west, the level of the subsoil water was very high, most of the cellars of the lower part of the village were flooded, and, to judge by the level of the lake, the very porous soil of the new cemetery should have been saturated. Finally, the temperature, which had been low, rose to 45 deg. Fahr. The author believes these conditions favoured the development of the miasmatic germs from the fermenting detritus in the soil of the cemetery, and that the north-west wind carrying these germs swept over only one house in the village —the school-house—and it was there that the first twelve cases occurred. Four other patients were suspected of catching it indirectly, while twenty-eight acquired it by direct contagion. After the Easter vacation, the children who returned to school remained free. Of the forty-two cases, two died. The duration of the disease never exceeded eight days. The hepatisation involved the right lower lobe sixteen times, the left lower lobe fifteen times, and once the left apex. The onset was always sudden, without warning, and the general phenomena were those of acute pneumonia.

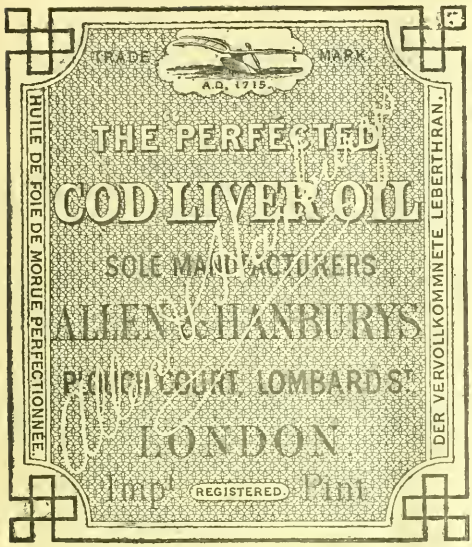
5. *Brown-Séquard and Charcot on Paraplegia in Hemiplegics.*—Dr. Brown-Séquard, at the Société de Biologie (*Le Prog. Méd.*, 1882, No. 4), having remarked that when in London he had often observed weakness of the limbs on the opposite side in cases of hemiplegia, M. Charcot confirmed his observation, and said that the lower extremity showed the paresis much more than the upper. A few days ago, he had seen an old hemiplegic, who had become paraplegic after a blow on the paralysed leg. He thought the explanation was to be found in the study of spinal scleroses. Pitres had shown that in many cases of hemiplegia the descending sclerosis is strictly and exclusively unilateral, but much more frequently than is supposed may be found upon both sides.

6. *Charpentier on Myxœdema.*—M. Charpentier (*Le Prog. Méd.*, 1882, No. 5) publishes another case of myxœdema in a child aged four years, admitted into La Salpêtrière. The child was born in Paris of healthy parents; one uncle was insane, and a maternal aunt had rickets; two younger sisters were quite healthy. There was nothing unusual about the child, which was well formed, until, at five months, it was treated for lumbar caries, complicated with convulsive attacks, occurring five or six times a day, and which lasted six months. It was after this that the swelling of the skin was noticed, and the other changes followed. The face is described as being rounded; the eyelids swollen, motionless, the eyes just open, with a melancholy expression, as if in tears; the nose is broadened, the cheeks are blue, cold, tense, and round, and contrast with the rest of the skin, which is yellowish-white, like honey; the thickened tongue hangs always over the teeth, and saliva drops from the mouth. The skin feels cold, and has a bluish look, especially at the loins, nates, and extremities. The latter are deformed and massive. The palmar hollow is replaced by a rounded surface; the skin is thickened; it does not plt on pressure, but is soft and elastic; it is not adherent to the subjacent parts; the skin on the thorax and neck is normal. The puffiness of the supraclavicular regions, said to be pathognomonic of cretinism, is absent. The hair is scanty, the nails normal, the teeth yellow; there are no molars. The nostrils are scarcely visible. The digestive, respiratory, and circulatory organs are normal, there is no albumen in the urine. The cry is guttural, hoarse, but infrequent. There is no goitre, no cranial deformity. The ears are normal. There is no spinal deformity, except the remains of lumbo-sacral caries, as understood by the old scars of the cautery. There are no other manifestations of scrofula, and no signs of syphilis. Intellectually, she is a complete idiot, remains motionless, mute, sad, and silent. She does not know how to direct her eyes, cannot hold up her head; she moves her limbs, but, without directing them, cannot stand erect. The case differs from those already described in the age of the patient; and its relation to the spinal caries and convulsive attacks is of interest.

7. *Hewitt on Contagion carried by Domestic Animals.*—Dr. Hewitt (*Jour. of Compar. Med.*) reports an outbreak of diphtheria transmitted by a cat. He had noticed for some days that the cat had some swelling of the glands of the neck, and after a little time it died. The same day, diphtheria of a malignant type showed itself in the family. Two or three children died. Dr. Hewitt himself had a narrow escape, and a serious epidemic followed in the neighbourhood. ROBERT SAUNDBY, M.D.

8. *Normann on Death from Ascaris Lumbricoides in the Air-Passages.*—Herr I. Normann records in the *Norsk Magaz. for Lägevidensk.*, series 3, Band xi, the case of a boy, four years old, who was one evening seized with difficulty of breathing, which steadily increased until, the next evening, he had severe dyspnœa with prolonged sighing inspiration, while expiration was easy and unimpeded. There was no hoarseness; and nothing could be found on examining the neck. The child died in the night. The disease was supposed to be croup; but the necropsy discovered an ascaris 19 centimètres (nearly 7½ inches) long in the trachea and its larynx, with its upper end projecting 2 centimètres above the rima glottidis. A. HENRY, M.D.

9. *Tuczek on a Case of Objective Tinnitus Aurium causing Melancholia.*— F. Tuczek relates this case in the *Berl. Klin. Woch.*, 1881, No. 30. After abortion, attended by copious hæmorrhage, in the third month of pregnancy, a woman, aged 29, became restless, depressed, and apathetic. Sleep was disturbed by frightful dreams, and the patient had delusions as to her relations being in a state of abject poverty; at the same time, she suffered from continual swimmings in the head and noises in the ears, to which the patient attributed her depression and melancholy. On approaching the patient's ears from either side, a clicking noise was audible at a distance of 20 centimètres (about 8 inches), which resembled the noise produced by clicking the nails, or the passage of an electric spark. The noise was rhythmical, occurring in a frequency double to that of the pulse, and was bitterly complained of by the patient, who likened



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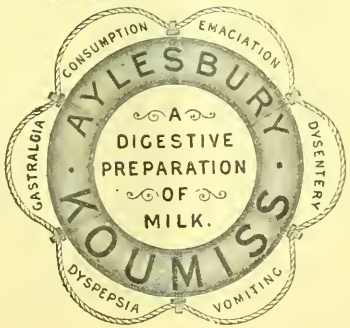

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it to the ticking of a watch. Hearing was perfect, and examination of the ears showed no lesion. It having been noticed during the use of the speculum, that, when it touched the posterior wall of the meatus, the noise stopped, the meatus was plugged with wadding, with the result that there was an immediate cessation of the tinnitus, and no recurrence of it when, in twenty-four hours, the wadding was removed. Immediate improvement in the general condition of the patient took place, and all evidence of melancholy disappeared.

ROBERT M. SIMON.

10. *Taylor on Amydalotomy and Suicide.*—Mr. R. B. Taylor, in the *Med. Times and Gaz.*, Dec. 1881, p. 758, refers to four cases of suicide in young persons subsequent to excision of the tonsils, observed by Dr. Rubio. The explanation offered as possible is, 'that pharyngeal reflex diseases possess features to some extent similar to those present in persons suffering from fissure of the anus. Just on the same principle as the sufferings of these latter patients induce a state of terror and mental depression bordering upon hypochondriasis, so also a fissure of the pillars of the pharynx, caused by nipping of a portion of the same during excision of the tonsils, inducing thereby a state of constant irritation of the unhealed pharyngeal fissure, kept up by the act of deglutition and the contact of solid and liquid food, may influence the reflex action on the brain sufficiently to lead to perversion of the affected faculties, despondence or anger, and, ultimately, to self-destruction.'

11. *Hutchinson on Rare Cases of Chronic Rheumatism.*—Mr. Jonathan Hutchinson gives a clinical lecture upon certain rare cases of chronic rheumatism, in which parts suffered that are usually attacked only in gout (*Med. Times and Gaz.*, Dec. 1881, p. 757). The case upon which the lecture was based was that of a woman, aged 38. She first had 'rheumatism in her wrists' thirteen years ago, first in the right, then in the left wrist. Then she had general pain in joints, 'a sort of rheumatism'; all the smaller joints were puffy and stiff. There was no gout in the family. When seen in 1877, the fingers were, several of them, considerably distorted, and nearly all their joints were swollen. The wrists were slightly swollen, but moved freely. The shoulders were somewhat stiff. The small joints of her feet suffered in the same way as those of her hands. She had, indeed, the usual conditions of chronic rheumatism (with absorption of cartilage), falling with especial severity on the smaller joints, and attended by thickening and comparatively little synovial effusion. Besides the symptoms usual to chronic rheumatism, she presented affections of certain parts which are peculiarly liable to be affected in gout, and markedly the helices of the ears. On the antihelix of each ear, exactly where gouty-concretions are often met with, and with the most exact symmetry, were little inflamed nodules, which, on section, yielded only a little pale gelatinous substance, with no urate of soda. On the tip of the left elbow, also, there was a lump similar to that so frequent in gout. On various parts of the fingers, too, near the joints, but not in them, nor adherent to them, were lumps of thickening, not of stony hardness, nor, apparently, containing chalk; but, again, exactly like those of gout in all other qualities. This case, and another that Mr. Hutchinson has met with, tend to show that the line of distinction between gout and rheumatism is very gravely endangered.

12. *Drummond on Diffused Hepatic Aneurism causing Fatal Intestinal Obstruction.*—In the *Brit. Med. Jour.*, Dec. 1881, p. 1066, a case is reported in which Dr. Arnison performed abdominal section in a case under Dr. Drummond's care, after all therapeutic means had failed to give relief. An incision was made to expose a mass which could be felt through the abdominal walls, occupying the position of the ascending colon. The peritoneum covering this mass was livid, and was mistaken for the intestine and opened. There was found a tubular cavity containing dark offensive blood-clot; within this cavity was also a biliary calculus like a nutmeg. The patient being *in extremis*, further examination was deferred till after death. It was then discovered that an aneurism of the hepatic artery had burst and become diffused, passing down behind the mesentery, and pressing upon and completely occluding the ileum just above the cæcum. A circular space, two inches and a half in diameter, was absorbed on the under surface of the liver, corresponding to the position of the gall-bladder, which, at the *post mortem* examination, could not be found.

13. *Wilks on Ulcerative Endocarditis or Arterial Anæmia.*—A most important lecture upon this subject is to be found in the *Brit. Med. Jour.*, Jan. 1882, p. 39. Dr. Wilks remarks at starting that the symptoms arising from embolism due to cardiac affections, although well described by Kirkes and other observers under the title of embolism, capillary phlebitis, ulcerative and suppurative endocarditis, mycosis endocarditis, etc., are still frequently overlooked and by many altogether unrecognised. In many cases the symptoms are entirely pyæmic, in others mistaken for typhoid fever or subacute rheumatism; but a cardiac *bruit* during life, and infarcts in the spleen, liver, and kidneys, after death, without the pathological symptoms of the disease with which the affection had been confounded, clearly point out the nature of the disease. Dr. Wilks reports some well-marked cases where the disease had been mistaken for typhoid fever and other affections. [In the *Med. Digest*, sections 17, 765, 767, 779, 787, a large amount of interesting matter may be consulted with advantage in reading Dr. Wilks's case; and, in the next edition, in June 1882, it will be seen how much attention has recently been directed to the subject, and how much light has been thrown upon it by numerous observers.—*Rep.*] R. NEALE, M.D.

14. *Kulenkampff on a Case of Nerve-Stretching in Locomotor Ataxy.*—The patient in this case was a barber, aged 43, with marked ataxy, and intolerable pain in the lower limbs. Both sciatic nerves were stretched, the left so strongly that the body was raised. The wounds were treated antiseptically, and healed by first intention. On the patient recovering from the anæsthetic, he had excruciating pain, in no way relieved by morphia injections. On the day after the operation, there began a cystitis, which quickly became septic, and the patient died on the seventeenth day after the operation in high fever. The operator (*Berl. Klin. Woch.*, 1881, No. 48) believes the cystitis to have been neuroparalytic, like that occurring in fracture of the spine, the roots of the sacral nerves having been so injured by the stretching that the vesical nerves were functionally destroyed. JAMES ANDERSON, M.D.

SURGERY.

RECENT PAPERS.

1. MASTIN.—Tubular Slough of the Urethra. (*Annals of Anatomy and Surgery*, Dec. 1881.)

2. HOWE.—A Lingual Tourniquet. (*Ibid.*)

3. LEALE.—Pyæmic Parotitis. (*Proceedings of the New York Acad. of Med.*)

4. POINSOT. — Resection of the Ankle. (*Revue de Chir.*, No. 10, 1881.)

5 BRAUN.—Extirpation of the Kidney. (*Deutsche Med. Woch.*, 1881, Nos. 31, 32, 33.)

6. ROSSANDER. — Properitoneal Hernia. (*Hygiea*, 1881; and *Nord. Med. Arkiv*, Band xiii.)

7. BOJIN.—Rupture of the Urethra with Recto-Vesical Fistula. (*Eira*, 1880; and *Nord. Med. Arkiv*, Band xiii.)

8. AUBERT.—Cyst of the Cranium: Cerebral Compression: Relief by Operation. (*Lyon Méd.*, No. 32, 1881.)

9. SMITH.—Medulla Arthritis. (*Lancet*, Dec. 1881, p. 1077.)

10. ANDERSON.—Reduction of Dislocations by Manipulation. (*Brit. Med. Jour.*, Jan. 1882, p. 10.)

11. OAKELEY.—Complete Posterior Dislocation of the Knee-Joint with Life-long Use. (*Lancet*, Jan. 1882, p. 53.)

12. GORHAM. — Bullet-Wound of the Left Kidney. (*Brit. Med. Jour.*, Dec. 1881, p. 1050.)

13. GREENISH.—Double Vertical Fracture of the Pelvis. (*Brit. Med. Jour.*, Dec. 1881, p. 1056.)

1. *Mastin on Tubular Slough of the Urethra.*—Dr. Mastin describes, in *Annals of Anatomy and Surgery*, Dec. 1881, the case of a man, aged 44, who noticed, fourteen days after an impure intercourse, vesical and urethral uneasiness and a sanious discharge, in which blackish specks and threads were mingled. To relieve this, the patient procured a saturated solution of lead acetate and zinc sulphate, and used the same as an injection. This was employed for three days, when the discharge ceased, the stream of urine also diminishing in size. On the fourth day there was complete retention, and, on examination, the urethral meatus was found occluded with a greyish substance. Gentle traction removed a tubular cast, of the ordinary size of an urethra, in length 2¼ inches. In the evening of the same day, after excessive straining, another piece of urethral exfoliation was passed, the length of which was 3¼ inches. A few days afterwards, the man was well enough to return to work. The slough was soft and friable, and bore evidence of involving the entire thickness of the mucous membrane. Dr. Mastin remarks on the rarity of the lesion, and attributes its occurrence to the use of the injection. The absence of constitutional symptoms excludes the notion that the pseudo-membrane may have been diphtheritic in its origin. A stricture, of the length of the slough, is predicted as the future of the case.

2. *Howe on a Lingual Tourniquet.*—This instrument is described by Dr. Howe in the *Annals of Anatomy and Surgery*, Dec. 1881. It is of the shape of an ordinary safety-pin, having attached to the inside of the external bar a second movable bar, 1½ inches long, worked by a screw on the external surface. To use the same, the steel pin is inserted into the floor of the mouth opposite the second molar tooth, directed, at first, towards the median raphe of the tongue, then backwards towards the foramen cæcum, and is finally brought out in front of the anterior pillar of the fauces. The pin is then closed, and, by using the screw, the movable bar is made to press firmly on the trunk of the lingual artery, and will control all hæmorrhage, and permit the artery to be readily ligatured when divided in removal of the tongue. T. F. CHAVASSE, M.D.

5. *Seale on Pyæmic Parotitis.*—At a meeting of the New York Academy of Medicine, on Nov. 24th, 1881, Dr. Charles A. Seale read a paper on pyæmic parotitis, and presented two patients, one of whom had lost the gland through suppuration, and the other presented adhesions in the cheek over Stenson's duct. Dr. Seale differs from the numerous writers who think that suppuration of the parotid is due to mechanical occlusion of Stenson's duct. His observations have led him to the conclusion that, when this suppuration occurs in cases of enteric fever, dysentery, or osteomyelitis, it always arises from systemic poisoning from an ulceration of such a low grade, where constitutional changes are constantly going on, that the glands of the body exert their influence to eliminate the *materies morbi*, and so metastatic abscesses of the parotid gland, liver, lungs, etc., are formed. As to the frequency of suppuration of the parotid, Dr. Seale states that it is proved by statistics to be a not very uncommon affection. In illustration of the association of suppurative parotitis with systemic poisoning, the history of four cases is given: one from pelvic cellulitis, one from ulceration of the intestine in typhoid fever, one from extensive ulceration of the mouth and stomach, and one from suppuration of the kidneys following an acute attack of degenerative nephritis. In the same connection, two cases are recorded of metastatic abscesses of the liver, as illustrative of the same provoking cause. Dr. Seale has never seen a case of pyæmic suppuration of the parotid gland end in recovery, when the pus had not been permitted an exit. In three of his cases he had incised the abscess, and in another there had been a profuse discharge of pus from the ears for a period of seven months, the discharge having made its way through the middle ear. In one case only had he seen perforation of the cartilage of the external auditory canal.

4. *Poinsot on Resection of the Ankle.*—Dr. Poinsot of Bordeaux reports, in the *Revue de Chir.*, No. 10, 1881, a successful case, under his own care, of tibio-tarsal resection, and endeavours to show by tables of collected cases that this operation, when performed for the removal of disease, gives most satisfactory results; the mortality of the operation, according to these tables, being almost nothing, and the proportion of failures not higher than fifteen per cent. When other modes of treatment have failed, and when the fungoid process has destroyed the spongy tissue of the epiphysis and tarsal bones, and when suppuration has taken place, and fistulous communications have been established between the interior of the joint and the surface of the limb, is it not better, the author asks, to reset the diseased bone than to wait until the progress of the disease will have rendered amputation the only resource? There can be no doubt that tibio-tarsal resection, though generally allowed to be of great value in cases of severe injury to the ankle, has, as a resort in cases of disease of this joint, long been out of favour both in France and in this country; the main grounds of objection to the operation being the duration of the after-treatment and the frequency of relapse, and also the functional unfitness of the extremity, in consequence of its shortening and of deviation of the foot. Dr. Poinsot, struck by the excellent results of the opera-

tion in his own case, was led to determine, by a study of Spillmann's tables, published in 1869, and of a collection made by himself of subsequently recorded cases, whether the objections to pathological resection of the ankle were really well founded. In thirty-four cases, collected by Spillmann, the proportion of deaths was over 25 per cent., and of failures about 40 per cent. The conclusion drawn by Spillmann, from this collection of cases, was that tibio-tarsal resection, for pathological affection of the ankle, is a very hazardous operation, not so much by reason of its mortality as on account of the subsequent tendency to relapse. In a collection of thirty-two cases, published by Hancock in 1873, twenty-eight of which had not been included in Spillmann's tables, better results were shown; the mortality being about 18 per cent., and the proportion of failures about 25 per cent. Dr. Poinsot's table, which includes forty-two instances of tibio-tarsal resection, in most of which the operation was performed after the date of Hancock's record, shows about the same proportion of failures, 25 per cent., but a much reduced mortality, four cases only having been fatal. An attempt is made, by a further analysis of these forty-two cases, to test the influence of Listerism in pathological resection of the ankle. In twenty-one cases that were treated after the operation by Lister's dressings, there were three cases recorded as unsuccessful (14.28 per cent.) In one of the successful cases of this series, the astragalus, os calcis, scaphoid, and also some portions of the metatarsus were removed. W. Johnson Smith.

5. *Braun on Extirpation of the Kidney.*—In commenting on four cases of nephrectomy operated on by Czerny, with two deaths and two recoveries, H. Braun (*Deutsche Med. Woch.*, 1881, Nos. 31, 32, 33) discusses fully the relative merits of incision in the lumbar region and at the linea alba. It has been the custom to make the incision at the linea alba in cases where there is evidence of dislocation of the kidney, or where there is a renal tumour of considerable size, reserving the lumbar operation for cases in which the kidney is about normal in size and situation. From an examination of the records of 63 nephrectomies, he finds that the lumbar incision was employed in 35 cases, with only 11 deaths, while incision through the linea alba was followed by death in 18 cases out of 28. From these facts, Braun argues strongly in favour of the lumbar operation.

Robert M. Simon.

6. *Rossander on Properitoneal Hernia*—Dr. C. J. Rossander, in *Hygeia* for 1881 (*Nord. Med. Arkiv*, Band xiii, Häft 3), gives a brief account of two cases of properitoneal hernia which he has been able to find in medical literature, and adds a case which came under his notice. The patient, a woman aged 43, had, for more than ten years, had a crural hernia, which could never be completely reduced. Her distress at last became so great that she desired to be submitted to operation, which was accordingly performed under strict antiseptic precautions. As, after the sac had been opened, the hernia, which was only omental, could not be reduced, the case was suspected to be one of properitoneal hernia, and the suspicion was confirmed by closer examination. A diverticulum, an inch long, extended upwards from the hernia, in front of the peritoneal layer of the abdominal wall. The opening between the sacs having been enlarged, the whole mass was reduced. The anterior and posterior walls of the hernial sac were then sewn together as accurately as possible, and the external wound was closed. A small collection of pus was observed on the seventh day; but it interfered little with the process of healing.

7. *Bolin on a case of Rupture of the Urethra with Recto-Vesical Fistula.*—The principal interest of this case, reported by Herr W. Bolin in *Eira* for 1880, (*Nord. Med. Arkiv*, Band xiii, Häft 3), lies in the manner in which the injury was received, and the symptoms which occurred during the treatment. The patient, a tailor aged 23, who, as far as was known, had never previously suffered from disorder of the urinary organs, ruptured his urethra through violence in riding. The injury was followed by pain, and the passage of urine containing much blood. Attempts to introduce a catheter only produced more copious hæmorrhage; at last, therefore, the bladder was punctured above the pubes, and a drainage-tube was introduced. The surgeon who attended him also applied a ligature around the root of the penis. When Herr Bolin saw him, he removed this ligature, and succeeded in introducing an elastic catheter into the bladder. The drainage-tube was removed two days later. All went on well at first, but at the end of eight days the hæmorrhage returned, and a catheter could not be passed. Suprapubic puncture of the bladder again became necessary. After ten days, the urine began to pass by the normal channel; but now hæmorrhage from the rectum occurred, and an opening of the size of a little finger was found between the bladder and the rectum. The patient could not bear a catheter retained in the bladder, but repeated introduction of the catheter was well borne. The opening gradually contracted, but was not completely healed when the patient left the hospital at the end of a fortnight. A. Henry, M.D.

8. *Aubert on a case of Cyst of the Cranium: Cerebral Compression: Relief by Operation.*—This case, reported by M. Aubert in the *Lyon Méd.*, No. 32, 1881, has a special interest from the influence which the cure of the cyst had on the intelligence of the patient, in consequence of the raising of the bony table. The cyst, about 5 centimètres in diameter, consecutive on a blow received upon the head twenty years previously, was situated in the lateral portion of the right frontal region, half in the hairy scalp, half in the free portion of the forehead. Opened by thermo-cautery, after an exploratory puncture, it gave issue to a yellow liquid containing crystals of cholesterine. The bed of the cyst was formed by a depressed bony wall. The wound was washed out with carbolic acid and dressed with boracic lint, and precautions were taken to delay union. The bony table rose by degrees; and, at the end of about two months and a half, it was at the same level as the frontal surface. From that moment the patient, who was a married woman about 50 years old, and had no memory at all for the ordinary occurrences of life, and was extremely negligent in all the cares of her household, rapidly became a careful, attentive housewife. This change was so marked and so sudden, as to be noticed by every one who was in the habit of seeing the patient.

9. *Smith on Medullo-Arthritis.*—In the *Lancet*, Dec. 1881, p. 1077, Mr. J. Greig Smith, in a clinical lecture, divides arthritis into medullo-arthritis and synovio-arthritis, one commencing as inflammation of the pink marrow in the cancellated ends of the long bones, the other in the synovial membrane, and both ultimately proceeding to disintegration of all the structures entering into the articulation. In the synovial disease, there is little hyperæmia, and, except in the advanced stage, little pain. Even when there is abrasion of the cartilage, the flabby

anæmic granulations, packed between the denuded surfaces, act as buffers and prevent pain. Grating inside a joint is supposed to mean ulceration of cartilage; but, as has often been pointed out, there may be much abrasion without any grating, when masses of synovial granulations serve to separate the articular surfaces; walking may even be fairly performed, without much pain, with a joint far advanced in synovial disease. A most important diagnostic fact is, that even in the last stages of the synovial form of disease, there is no 'starting' as the patient drops off to sleep. In medullo-arthritis, where a highly sensitive and vascular organ is compressed within a bony shell, there is tenderness during, and a great dread of, any sharp movement. It is in this form of disease that nocturnal startings occur. Two cases are reported of advanced medullo-arthritis of the lower end of the femur, in which the diseased bone and medullary matter were freely scooped away, and a perfect cure resulted. In one case, the blood-clot that filled the cavity left by the gouge became organised, and the wound was perfectly closed in ten days. In the early stages of morbus coxarius, the free opening and cleansing out of the diseased cancelli is strongly advocated, not as a substitute for milder measures, but as a possible preventive of excision and amputation.

10. *Anderson on Reduction of Dislocation by Manipulation.*—Dr. J. H. Anderson describes a ready method of reducing dislocations of the hip and shoulder by simple manipulation (*Brit. Med. Jour.*, Jan. 1882, p. 10). The arm is raised to a level with the shoulder, and the finger inserted under the dislocated head of the humerus, which is then lifted into its socket. A similar procedure is adopted with the hip; the foot being raised from the floor to a height of about twelve inches, the fingers are placed beneath the head of the femur, and lift the dislocated bone into the acetabulum.

11. *Oakeley on Complete Posterior Dislocation of the Knee-Joint, with Life-long Use.*—Mr. J. Bagnall Oakeley reports and figures a case of the above injury in the *Lancet*, Jan. 1882, p. 53. The patient, aged 70, when seen, stated that, when nine months old, he fell and damaged his knee-joint, causing complete posterior dislocation. He has worked at brick-making all his life, and has never been laid up on account of his knee.

12. *Gorham on Bullet-Wound of the Left Kidney.*—In the *Brit. Med. Jour.*, Dec. 1881, p. 1050, Dr. J. J. Gorham reports an interesting case, in which the left kidney was wounded. The patient was kept well under the influence of morphia, and he did well until the twenty-fifth day, when the urine was almost free of blood; but on this day he suddenly passed thirty ounces of arterial blood by the urethra, doubtless due to ulceration of a renal artery. For four days his condition was very critical, large quantities of blood being constantly voided from the bladder. On the thirty-fifth day the urine again became free from blood, and he was regaining strength daily.

13. *Greenish on Double Vertical Fracture of the Pelvis.*—Mr. R. W. Greenish gives the notes of a case under the care of Mr. Robinson (*Brit. Med. Jour.*, Dec. 1881, p. 1056), in which a man, sitting across a plank, fell about ten yards, through the plank breaking. He struck the ground with his legs separated, and a portion of the plank between them. The fracture appeared to run through the horizontal ramus of the os pubis, and through its descending ramus or the ascending of the ischium, thence through the narrowest part of the ilium, just behind the acetabulum. The man was treated by a Bryant's parallel splint, and was about on crutches after six weeks. RICHARD NEALE, M.D.

ORTHOPÆDIC SURGERY.

RECENT PAPERS.

1. PHELPS.—Treatment of Double Talipes Equino-Varus. (*New York Med. Rec.*, Sept. 24, 1881.)
2. GREEN.—Chronic Club-Foot successfully treated without Tenotomy by Continuous Extension and Stretching. (*New York Med. Jour. and Obst. Rev.*, Nov. 1881.)
3. BRADFORD.—An Appliance for the Correction of Aggravated Club-Foot. (*Boston Med. and Surg. Jour.*, Dec. 1881.)
4. CABOT.—A Wire-Splint for Hip-Disease. (*Boston Med. and Surg. Jour.*, Dec. 1881.)
5. JUDSON.—A Practical Point in the Mechanical Treatment of Hip-Disease. (*New York Med. Gaz.*)
6. TAYLOR.—Location, Age, and Sex, in Caries of the Spine. (*New York Med. Record*, Aug. 13, 1881.)
7. BROWN.—Ankylosis of the Hip-Joint. (*Boston Med. and Surg. Jour.*, June 2, 1881.)
8. WAGNER.—The Treatment of Severe Club-Foot. (*Inaug. Diss.*, 1881.)
9. POOKE.—Osteotomy for Genu Valgum. (*New York Med. Record*, Aug. 13, 1881.)
10. LUCAS.—Cross-Legged Progression. (*Clin. Society's Trans.*)
11. PRADIGNAC.—Osteotomy: its Indications and Results. (*Bull. de Thèrap.*, Dec. 1881.)
12. VON BERGEMANN.—The Making of Cases for Scoliosis. (*Würzberg. Phys. Med. Sitzungsber*, 1881, No. 1.)

1. *Phelps on the Treatment of Double Talipes Equino-Varus by Open Incision and Fixed Extension.*—Dr. A. M. Phelps, of Chateaugay, New York, relates in the *New York Med. Rec.* (Sept. 24, 1881), a severe case of what would in this country be called talipes varus, in a girl, aged 6½ years, who was operated upon in the following manner. An incision was made half an inch in front of the ankle joint, extending across the inner side of, and two-thirds the distance across, the soles of the feet, through the skin and cellular tissues. All the contracted parts were divided, the incisions reaching to the bones; the tendo Achillis was also divided. The artery and nerve of the right foot were divided accidentally. The wounds were dressed daily with balsam of Peru and oakum, and the feet kept extended upon a foot-rest 'devised for the purpose'. The wound healed in three weeks; the foot-board was worn for fourteen weeks, the patient using crutches. A Sayre's shoe was then put upon the right foot, and an ordinary shoe with a stiff 'counter' upon the left. 'The patient can walk rather awkwardly without shoes.' Another child, a boy 7½ years old, was also operated upon in a similar manner for varus of one foot, with a like result. The excuse for operating by open incision in these cases was that, in the first patient, an attempt at subcutaneous operative treatment had failed; but failure was almost sure to follow the operation as described. The tendo Achillis, tibialis anticus, and plantar fascia were all divided at one operation, whereas it is an established rule of orthopædic surgery in this country to leave the tendo Achillis until the other parts are stretched, for without the resistance of the tendo Achillis no *point d'appui* is obtained for effecting pressure. Conse-

quently, we are not surprised to read that 'the feet were imperfectly restored to their normal position'.

2. *Green on Chronic Club-Foot successfully treated without Tenotomy, by Continuous Extension and Stretching.*—Dr. J. S. Green (*New York Med. Jour. and Obst. Rev.*, Nov. 1881) protests against the frequent use of the tenotome. He asserts that forcible reduction of the deformity, both with and without tenotomy, has frequently failed. It has failed after tenotomy, because the parts do not accommodate themselves to the rapid reduction. It has failed without tenotomy, because misdirected and misapplied force has produced excoriations of the soft parts and synovitis of the joints. An instrument for reducing club-foot should be made to act as follows: 1. To separate as much as possible the articular surfaces of the bones by extension, while pressure is brought to bear in the required direction; 2. To produce gradual reduction of the foot to a normal position by continuous stretching, acting exactly in an opposite direction to the lines of the deformity. The writer advocates Dr. Stillman's apparatus. This 'club-foot twister' consists of a local extender provided with a slotted arc for gradual movement placed on each side of the ankle-joint, and another placed in front of the arch of the foot. Below, these are attached to a flexible felt or leather sole, on which the foot is firmly fastened by bandages; and, above, they are connected to metal terminal plates, which are bound down to the leg by some immobile dressing. The writer records a case treated by Dr. Stillman and himself, which they succeeded in curing after tenotomy had failed.

3. *Bradford on an Appliance for the Correction of Aggravated Club-Foot.*—Dr. Bradford showed an apparatus at a meeting of the Suffolk District Medical Society (*Boston Med. and Surg. Jour.*, Dec. 1881). It is a modification of Dr. Morton's instrument. The power for stretching the foot after tenotomy is applied by means of a long screw, similar to that of the osteoclast; the force bears upon the inner side of the foot; the os calcis and astragalus are fixed by being bandaged to a plate connected with that on which the screw works, and also by means of a strap wound round the foot over the astragalus. The appliance is so arranged that, besides the forcible abduction of the foot, the foot can be twisted and flexed. Reduction is effected by force, the patient being under the influence of an anæsthetic. The foot is fixed in the improved position by plaster-of-Paris bandage. Severe pain is felt for a few hours. A second operation may be requisite.

4. *Cabot on a Wire Splint for Hip-Disease.*—Dr. Cabot showed a splint at a meeting of the Suffolk District Medical Society (*Boston Med. and Surg. Jour.*, Dec. 1881). It is a modification of Thomas's splint. The advantages claimed for it over others in general use are—that it can be easily made; it can be adjusted without difficulty; extension of the limb can be effected; and it completely immobilizes the joint.

5. *Judson on a Practical Point in the Mechanical Therapeutics of Hip-Disease.*—Dr. Judson read a paper before the Medical Society of New York, Nov. 28, 1881 (*New York Med. Gaz.*). He referred to the difficulties met with in treating cases by Taylor's splint, from the relaxation of the straps fastened to the adhesive plasters at the lower part of the apparatus, whenever the patient assumes the erect position, and throws his weight upon the splint. Dr. Judson suggests a modification in the adjustment of the perineal straps, making them short, and attached to a low perineal band. [This modification is another attempt to treat hip-joint disease by an apparatus, without that absolute recumbency which cautious surgeons on this side of the Atlantic consider necessary for the successful treatment of this disease during its active stages.—*Rep.*]

6. *Taylor on Location, Age, and Sex in Caries of the Spine.*—Dr. H. L. Taylor (*New York Med. Rec.* Aug. 13, 1881) found, in 300 cases, that every vertebra was diseased except the first cervical, where disease is not readily recognised. There may be said to be three centres of maximum liability: first, at the sixth and seventh cervical vertebræ; second, about the eighth dorsal; third, at the second and third lumbar. The frequency of disease is greatest in the dorsal region, and nearly as great in the lumbar, but less frequent at the cervical. The points of least liability to the disease are from the first to the fourth dorsal and the eleventh and twelfth dorsal vertebræ, besides the two extremities of the spinal column. These facts the writer explains (assuming that injury is the chief inducing cause of Pott's disease) by showing that the regions of greatest liability to disease are the regions most exposed to jar. The dorsal convexity is the most vulnerable region of the spine, not only because of its mechanical relation to the curve of the spine, but also as, owing to its connection with the ribs and sternum, it is more liable to receive a jar communicated from blows than the cervical or lumbar region. The pressure, however, of the superincumbent mass neutralises this immunity in the lumbar region. The upper dorsal region is to an extent protected by the arms and scapulæ, which, not being fixed to the spinal column, break the jar of a fall. The upper lumbar may be regarded as being placed at the point of the 'natural hinge' between the upper and lower halves of the body. In regard to age, in 375 cases, 226 were under five years when the disease began, 68 were between 5 and 10, 24 between 10 15, and so on, the number diminishing in each decade. The disease began in 77 cases before the second year. Out of 412 cases, 235 were boys, 177 females.

7. *Brown on Ankylosis of the Hip-Joint.*—Dr. Buckminster Brown (*Boston Med. and Surg. Jour.*, June 2, 1881) describes an apparatus for correcting deformity, after division of tendons and muscles or cicatricial tissues, followed by forcible rupture of deeper seated impediments to motion. A block of wood, carved to fit the buttock, is secured by well padded straps passing over the ilia. At each side of the block is a narrow bar of steel extending to the knee, where a band grasps the thigh. Two ratchet-screws allow extension and flexion, abduction and adduction.

8. *Wagner on the Treatment of Severe Club-Foot.*—Dr. Wagner (*Inaugural Diss.*, 1881) says that when removal of bone is necessary, it is a question whether the astragalus alone, or the cuboid alone, or both bones, should be removed. Ablation of the astragalus alone has been very successful, but sometimes removal of the cuboid and the head of the astragalus together will be desirable. Lücke obtained an 'excellent result' by removing the head of the astragalus and the tip of the fibula.

9. *Poore on Osteotomy for Genu Valgum.*—Dr. Poore, in the *New York Med. Record*, Aug. 13, 1881, states that he prefers Dr. Macewen's operation to those which open the joint. Sixteen cases were operated upon without 'thorough Listerism'; and in one only was there any considerable suppuration, and in only

one did the temperature rise above 99.5 deg. (viz., to 102 deg. Fahr. for one evening). In a discussion on this paper, Dr. Weir advocated Delore's method of forcible straightening in young patients, but not in those above 13 or 14 years of age. He referred to Mikulicz, who experimented upon the dead body and ruptured the external lateral ligament ten times in nineteen cases, the ages of the individuals ranging from 19 to 23. Santi ruptured the external lateral ligament nine times in twelve cases. Delore found separation at the epiphysal junction in two children after operation (ages 7 and 3). Colin's osteoclast also produced separation of the epiphysis in some cases.

10. *Lucas on Cross-Legged Progression.*—Mr. Clement Lucas describes (reprint from *Clin. Soc. Trans.*) a peculiar and characteristic gait, which is brought about by disease and consequent ankylosis of both hip-joints. He has not been able to find any reference, in general surgical literature, to this deformity. He describes two cases which he brought before the Clinical Society. He thought that ankylosis had taken place in the hip-joint first attacked, before disease had progressed far in the other. The patient had then walked with crutches, bearing his weight on the convalescent limb, the other being rested across it. Eventually, the second hip having become ankylosed, the patient was able to walk without crutches in a peculiar cross-legged manner. In progression, these individuals walk from their knees, using these joints in place of the hips. In the case of one patient, a boy, ordinary pulpy or strumous synovitis was doubtless the original disease, whereas, in the other, the disease was probably osteo-arthritis. In the latter case, no dislocation had occurred at the hip-joints, and it was recommended that an attempt should be made to break down the ankylosis under an anæsthetic before resorting to a more serious operation.

E. Noble Smith.

11. *Pradignac on Osteotomy, its Indications and Results.*—Dr. Pradignac, in his *Thèse de Paris*, 1880, and *Bull. de Thérap.*, Dec. 1881, after a clinical study of the indications of osteotomy, arrives at the following conclusions. 1. In rickety deformities of the lower limbs, in the stage of osseous eburnation, simple or cuneiform osteotomy, according to circumstances, should be performed on patients from seven to ten years old. 2. Ankylosis of the lower jaw imperatively demands it. Simple osteotomy should be performed by Rizzoli's method. In ankyloses of the hip-joint in young children, the neck of the femur should be fractured; in adults, intertrochanteric and subtrochanteric osteotomy should be performed. In ankylosis of the knee, with intimate fusion of the bones, it is the only method of treatment. Cuneiform excision is especially indicated here. In ankylosis of the tarsus, osteotomy is likewise a desirable operation. 3. In badly united fractures, when extension or rupture of the callus has failed, osteotomy is indicated. 4. In the genu valgum of adults, total osteotomy is preferable to partial. In all cases, Lister's dressing is a valuable aid, which must not be neglected.

12. *Von Bergmann on the Making of Cases for Scoliosis.*—Von Bergmann (*Würzburger Phys.-Med. Sitz.*, No. 1, 1881) prefers poroplastic felt to plaster-of-Paris in the manufacture of corsets for cases of scoliosis. Recognising the difficulty of getting a perfect fit of the jacket, he advocates having always ready a series of jackets modelled, as far as possible, to the human form, and of various sizes. The patient is suspended, and one of these jackets fitted on, being cut out, of course, as required, and then gradually moulded to a perfect shape by being warmed over a copper shape fitted with hot water. Like Sayre, von Bergmann inserts a large pad on the concave side of the scoliosis, which he removes after hardening of the case. R. M. Simon.

PATHOLOGY.

RECENT PAPERS.

1. Déjérine and Leloir.—Degeneration of Cutaneous Nerves in Bed-Sores. (*Bull. de la Soc. de Biologie.*)

2. Oberst.—Metastatic Giant-Celled Sarcoma commencing in the Femur. (*Deutsches Zeitschr. für Chir.*, Band xiv.)

3. Hjelt.—Limited Atrophy of the Heart. (*Finska Läkaresallskapets Handl.*; and *Nord. Med. Arkiv*, Band xiii.)

4. Berner.—Large Tumour of Kidney in a Child. (*Norsk Magaz. for Lägevidensk*, 1881; and *Nord. Med. Arkiv*, Band xiii.)

5. Hartz.—Inversion of the Viscera. (*Aerztl. Intell.-Blatt.*, No. 22, 1881.)

6. Macleod.—Rupture of the Heart. (*Brit. Med. Jour.*, Dec. 1881. p. 1051.)

7. Leloir.—Calcification of the Gall-Bladder. (*Le Prog. Méd.*, No. 6, 1882.)

8. Suchard.—On Ainhum. (*Le Prog. Méd.*, 1882, No. 6.)

9. Poncet.—The Retina and Optic Nerve in Ataxy. (*Le Progrès Méd.*, 1882, No. 8.)

10. Straus.—The Changes in the Kidney after Ligature of the Ureter. (*Le Prog. Méd.*, No. 5, 1882.)

1. *Déjérine and Leloir on Degeneration of Cutaneous Nerves in certain Bed-Sores which occur in the Course of Spinal or Cerebral Affections.*—M. Déjérine and M. Leloir published in the *Archives de Physiologie* of 1881, a paper which demonstrated the nervous origin of certain bed-sores. The present communication, made to the *Bull. de la Soc. de Biologie*, demonstrates that, when sores appear in the course of cerebral affections or affections of the spinal cord, similar changes take place. Cutaneous nerves prepared by osmic acid and picro-carmine, two hours after the death of the patient, were, on microscopic examination, seen to have undergone great changes; there was not a single healthy tube, the greater number were simply empty sheaths; the others were in a state of advanced degeneration. The degeneration presented the ordinary features of a parenchymatous neuritis in a very high degree. The nerves, examined at a distance of 8 centimètres from the sores, were as much altered as those near it. M. Déjérine concludes from this that the nervous degeneration cannot be attributed to the cutaneous lesion.

W. Vignal.

2. *Oberst on a case of Metastatic Giant-Celled Sarcoma commencing in the Femur.*—Oberst reports (*Deutsche Zeitschr. für Chir.*, Band xxiv, s. 409) a case of myelogenous sarcoma occurring in a man aged 21, in whom a tumour, commencing in the internal condyle of the right femur, attained, in three months, an enormous size. An experimental incision, after the application of Esmarch's bandage, was followed by a rush of semi-fluid, semi-coagulated blood, and at the bottom of the incision the finger could be introduced into a large hollow, in which lay the almost

destroyed condyle. Amputation at the middle third of the femur was resorted to; but a recurrence of the growth in the stump, three months later, necessitated disarticulation at the hip-joint. Temporary recovery followed; but in seven weeks the patient became collapsed, and died after a few attacks of dyspnœa. On examination of the leg, there was found, in communication with the hollow part of the bone, a blood-cavity, the wall of which was partly ossified, and showed, in parts, a thin layer of tumour-tissue stretching to it from the inner side of the epiphysis. Microscopic examination showed the growth to be a sarcoma, possessing very little intercellular substance, a few giant-cells, and densely infiltrated with blood-corpuscles. Pulsation of the tumour had not been observed during life, but the free communication of several large arteries with the blood-cavity rendered it probable that pulsation or a bruit had existed. In addition to recurrence of the growth in the stump, there were found several large growths in the lungs, one of which had perforated the right pleura, and been followed by a considerable hæmorrhage into that cavity. Microscopically, the growths in the lung, as in the leg, proved to be a very vascular and soft giant-celled sarcoma.

Robert M. Simon.

3. *Hjelt on Limited Atrophy of the Heart.*—Herr O. Hjelt relates, in *Finskalakaresallsk. Handl.*, Band xxii (*Nord. Med. Arkiv*, Band xiii, Häft 4), the case of a man aged 79, who, about four and a half months before his death, began to complain of pain in the chest. From this time, there was increasing dyspnœa, and at the same time the legs first and then the whole body began to swell. On his admission into hospital, the heart's beat was irregular; the sounds were weak but clear; the pulse was small, soft, about 80; the urine was dark in colour, scanty, and slightly albuminous. At the necropsy, the heart was found to be 15 centimètres (about 6 inches) long and 16 centimètres broad, semilunar in form, with an obtuse apex, formed of both ventricles. The left ventricle was large; its muscular structure in front had an uniform pale brown colour, and was 2½ centimètres (one inch) thick; on the other hand, the posterior and upper part of the ventricular wall was only one centimètre thick, and was pervaded by firm greyish-white bands of connective tissue, which almost entirely replaced the muscular structure, and projected internally in the form of a firm network surrounding the delicate trabeculæ. The pericardium at this part was thickened. The posterior papillary muscles were small and atrophied; the anterior were large. The chordæ tendineæ were of usual thickness. The left auriculo-ventricular orifice was somewhat dilated, and the mitral valve was thickened at the apex. The aortic and semilunar valves were normal. The right ventricle was also dilated, and its wall thickened. The valves were normal. The left coronary artery was sclerosed. The right coronary artery contained about 4 centimètres (1.4 inches) from its origin, a firm red, firmly adherent thrombus.

4. *Berner on a Large Sarcoma of the Kidney in a Child.*—Berner relates, in the *Norsk. Mag. für Lägevidensk.*, 1881 (abstract in *Nord. Med. Arkiv*, Band xiii), the case of a boy aged 6 years, who, in August 1880, received a contusion in the back. This was followed by severe pains, extending to the hypochondrium and groins; there was also pain on moving the spinal column, which was curved to the right. Constipation and dysuria appeared, and the urine contained traces of blood and albumen. In the beginning of September, a tumour was discovered lying deep in the abdomen, and projecting forward under the costal arch. In the course of a month, it grew to the size of a child's head; it continued to increase, until it nearly filled the abdominal cavity. It was uniformly smooth, tense, fluctuating, and immovable, and gave a dull sound on percussion. After this, there was œdema of the lower limbs, abdominal wall, and back, with severe dyspnœa; the patient steadily lost flesh and strength, and died in February 1881. At the necropsy, a tumour was found growing from the right kidney. It filled the whole abdomen, being covered on the left of the middle line by peritoneum, and on the right lying in contact with the abdominal wall. It weighed 5,800 grammes (12¾ lbs. avoirdupois), and was 27 centimètres (10.6 inches) long, and 20 centimètres (7.8 inches) broad. On microscopic examination, it presented the character of a round-celled sarcoma.

5. *Hartz on Inversion of the Viscera.*—Dr. Hartz (*Aerztl. Intelligenz-Blatt.*, Nov. 22, 1881) makes an addition to the list of cases in which inverted position of the viscera has been found. The subject was a woman aged 32, who died of phthisis. During life, the heart-beat was found to be on the right side; and the liver could not be felt in its normal position, while there was dulness, which could only be referred to this organ, on the left side. The necropsy showed inversion of the position of all the thoracic and abdominal organs. A. Henry, M.D.

6. *Macleod on Rupture of the Heart.*—Dr. Neil Macleod, in the *Brit. Med. Jour.*, Dec. 1881, p. 1051, records a case of a man, aged 58, previously not known to be ailing, who was seized, at 5 A.M., with a violent pain in the chest. When seen at 8 A.M. he bore an anxious appearance, and complained of great pain in the middle line along the whole length of the sternum; he had great dyspnœa, with a weak voice. There was no lividity. The right pulse could scarcely be felt; the left was weak. The heart-sounds were feeble; no bruit. At noon he felt better, and stated that he had felt quite well up to the moment of seizure. At 6 P.M. he suddenly died. A dark line was found, on the *post mortem* examination, about an inch long, on the anterior wall of the left ventricle. The pericardium was full of blood-clots, but no distinct opening could be detected in the dark line; but, when water was poured into the heart, it slowly oozed through tiny openings in the line. Very extensive disease of the vessels of the heart and endocardium was also present, and yet there was no previous history of heart-trouble.

Richard Neale, M.D.

7. *Leloir on Calcification of the Gall-Bladder.*—M. Leloir reports (*Le Progrès Méd.*, 1882, No. 6) the case of a woman who presented, besides the signs of advanced phthisis, a tumour below the inferior border of the liver, of the size of a fist, hard, not easily movable, painless. Its nature was not determined during life. On opening the abdomen, a pyriform tumour was observed to occupy the position of the gall-bladder. It was 10 centimètres long, by 5 broad, and very hard. On section, its walls were 3 to 5 millimètres thick, and completely calcified; it contained a yellowish liquid full of shining plates of cholesterine, amid which floated some broken fragments of biliary calculi, about fifty altogether. The tumour was of a whitish-grey colour, covered by thickened peritoneum, and adherent to the under surface of the liver. The cystic duct was completely obstructed.

8. *Suchard on Ainhum.*—M. Suchard gives (*Le Progrès Méd.*, 1882, No. 6) the following details of the

microscopical examination of one of the thumbs from a case of this disease presented some time ago at a meeting of the Société d'Anatomique in Paris. The skin showed considerable changes near the characteristic groove; opposite the deepest part of this there was a large bundle of dense connective tissue, thickest in the mesial plane, and composed of white fibrous tissue, without admixture of elastic fibres. In its neighbourhood, the sweat-glands seemed to have been pushed aside by this development of fibrous tissue, or even suppressed altogether where it was densest. The papillæ had disappeared in the lowest part of the groove; laterally, they were flattened or elongated. In the part of thumb beyond the groove, there were only traces of the fatty degeneration which has been described; probably because the constriction of the band was still too incomplete to interrupt the circulation, and determine fatty necrobiosis. The radial and ulnar arteries, and the median and ulnar nerves, were examined carefully, but presented no appreciable changes.

9. *Poncet on the Retina and Optic Nerve in Ataxy.*—M. Poncet (*Le Progrès Méd.*, 1882, No. 8) has found in an ataxic patient, blind for ten years, the following lesions. In the central portion the optic nerve presented complete fatty degeneration, colourless vesicles, granulation without hypertrophy of the neuroglia, prolongations of the sheath, or multiplication of the cells of the neuroglia. In the orbital portion there was the same degree of granular fatty degeneration, but the fibrous prolongations of the sheath were hypertrophied, and there was perivascular sclerosis. The cells of the neuroglia and the fibres of the tissue presented no proper hypertrophy. The sclerosis was rather relative than real; it was due to the crowding together of the connective tissue after the degeneration of the nervous portion. In the retina, the fibres of the optic nerve and the ganglionic cells were destroyed; the cerebral plexus was a little altered; all the other external layers, including the cones, were healthy. He confirms his previous descriptions (Perrin and Poncet, *Atlas des Maladies Profondes de l'Œil*, pl. 34), and attributes the blindness and atrophy of the nerve and retina to a central nervous cause.

10. *Straus on the Changes in the Kidney after Ligature of the Ureter.*—M. Straus has brought a communication (*Le Progrès Méd.*, No. 5, 1882) before the Société de Biologie, in the name of himself and his *interne*, M. Germont, on the changes in the kidney following ligation of the ureter. They operated with every antiseptic precaution, and with very favourable results. They found that the consequence was hydronephrosis of the organ, characterised microscopically by dilatation of the tubules, followed by atrophy and collapse, without any interstitial nephritis. This result differs from that of MM. Charcot and Gombault; but they attribute this difference to their antiseptic precautions.

ROBERT SAUNDBY, M.D.

ANATOMY.

RECENT PAPERS.

1. BABER.—Researches on the Minute Structure of the Thyroid Gland. (*Phil. Trans.*, part iii, 1881.)

2. HANNOVER.—The Primordial Cartilage and its Ossification in the Human Cranium before Birth. (*Nord. Med. Arkiv.*, Band xiii.)

3. ELSBERG.—The Structure of Hyaline Cartilage. (*Med. News*, Jan. 7, 1882.)

4. SABOURIN.—The Biliary Lobule. (*Le Progrès Méd.*, No. 2, 1882.)

5. RAAB.—On the Anatomy of the Arteries of the Palm of the Hand. (*Wiener Med. Jahrb.*, 1880, s. 179.)

6. SINÉTY.—Ciliated Cells of the Ovary. (*La Tribune Méd.*)

7. STRAUCH.—The Human Sternum. (*Inaug. Dissert.*, Dorpat, 1881.)

8. MAIER.—The Ganglia in the Uriniferous System of Man and some Animals. (Virchow's *Archiv*, Band lxxxiv.)

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1. *Baber on the Minute Structure of the Thyroid Gland.*—In a paper in the *Phil. Trans.* for 1881, part iii, Dr. Baber gives a detailed description of the structure of the component parts, and their relation to the lymphatics of the thyroid of the dog, horse, rabbit, ox, sheep, cat, pigeon, fowl, rook, tortoise, frog, skate, and conger-eel. Amongst the numerous details, the following new and important facts may be specially mentioned. 1. The vesicles of the thyroid of the adult animal generally form closed cavities; in the gland of young dogs much branched vesicles occur, but these are merely forming a stage in the growth of the gland, and indicate that an increase in the number of vesicles is taking place. 2. The shape of the epithelial cells lining the vesicles varies in the different animals, but the general tendency is towards the columnar form. Amongst the epithelial cells exists a delicate reticulum. Between the epithelium of the vesicles and the epithelium of the intervesicular lymphatics, exists a delicate layer of connective tissue, forming, at the same time, the matrix for the capillary blood-vessels. 3. The vesicles contain, as a normal product, a homogeneous or granular material, the 'colloid' substance of the author. The most important point is the presence of blood in considerable quantities in the vesicles of perfectly normal glands. The red blood-corpuscles are found in various stages of disintegration and discoloration. It follows from this, that the passage of red blood-corpuscles into the vesicles, and their destruction therein, is a normal occurrence. [This fact may have an important bearing on the pathology of the gland, since by it the anæmia associated with hypertrophy of the thyroid (goître) may be readily explained.—*Rep.*] The blood thus effused contributes to a large extent to the formation of the above 'colloid' substance. 4. The lymphatics of the thyroid of the dog, the intervesicular capillary lymphatics, as well as the afferent trunks, contain the same homogeneous 'colloid' material as the vesicles; whence it follows that the products of the vesicles, having been absorbed by the lymphatics, become finally discharged into the general circulation, and thus enter the constitution of the normal blood. In the thyroid of the pigeon, and in that of the conger-eel, no lymphatics could be demonstrated; but in the tortoise there exists a rich network of them. In the dog, and in the last-named animal, the arteries are ensheathed more or less completely in their accompanying lymphatics. 5. Undeveloped portions, in the shape of convoluted solid cylinders, of epithelial cells, are frequently met with. The paper is copiously illustrated, giving good representations of all the more important facts.

E. KLEIN, M.D.

2. *Hannover on the Primordial Cartilage and its Ossification in the Human Cranium before Birth.*—The *Nordiskt Med. Arkiv*, Band xiii, Haft 2, contains an abstract of an article by A. Hannover on

the development of the human skull, founded on the examination of twenty-five embryos of from two to eight months. The primordial cartilage, he says, is the foundation of the occipital bone, the sphenoid, the ethmoid and the lower turbinated bones, the temporal bones, and the ossicula auditûs. The author's representation of the histology of the production of bone entirely supports the assumption of the origin of the true osteogenous tissue from periosteum. He entirely denies the transformation of cartilage-cells into bone-cells; and, in order to prove that the cartilage-cells have nothing to do with the osteoblasts, he refers, as instructive objects for examination, to the lowest division of the squamous portion of the occipital bone in a three months, fœtus, to the lancet-shaped ossification of the basilar portion of the occipital bone, and to a nucleus of bone observed by himself at the point of the internal pterygoid process, which afterwards becomes the hamulus pterygoideus. He also denies the direct transformation of cartilage into bone-substance in the frontal bone of the calf, as assumed by Gegenbaur. After some remarks on the ossification of bone developed between membrane, he describes the manner in which the separate cranial bones are formed in the primordial cartilage. With the exception of the upper part of the occipital portion, which is ossified in membrane, the occipital bone has four points of ossification. In the sphenoid bone, the cornua are formed in membrane; the whole of the rest of the bone, including the internal wing of the pterygoid processes, is developed in the primordial cartilage from not fewer than twenty-four points of ossification (besides the two for the cornua); the number may, however, on closer research, be reduced to eighteen. The ethmoidal portion of the primordial cartilage is somewhat greater than the bone formed in it; the cribriform lamina is formed in membrane, but the inferior concha in the cartilage, so that this should be reckoned as a part of the ethmoid bone. This bone has, in the embryo, centres of ossification only for the concha and the cribriform lamella. Of the temporal bone, only the mastoid and petrous portions belong to the primordial cartilage. Dr. Hannover gives a full description of each part, and remarks, that the recognised change of position of the membrana tympani during growth from a nearly horizontal to a nearly vertical position, is due to a peculiar turning of the whole petrous portion. All the three ossicles of the ear originate as a connected cartilaginous outgrowth from the inner cartilaginous wall of the tympanum. In another section of his article, Dr. Hannover describes the formation of vertebræ in the human cranium. He defines a vertebra as an originally cartilaginous, afterwards osseous, portion of a column which contains a portion of the central nervous system and of the chorda dorsalis. The chorda is beset with nuclei (notochord), and these indicate the limits between the vertebræ; the nuclei are smallest at the uppermost end of the chorda. The nuclei met with in the primordial cranium are therefore the right starting points for the demonstration of the vertebræ of the skull. Here, two constant nuclei are found: one in the middle of the basilar portion, another at about the situation of the spheno-occipital synchondrosis. The author regards the basilar portion as a double vertebra. The body of the third cranial vertebra he describes as being formed of the cartilage of the body of the sphenoid and the cribriform plate.

A. Henry, M.D.

3. *Elsberg on the Structure of Hyaline.*—At a meeting of the New York Academy of Medicine (*Med. News*, Jan. 7, 1882) Dr. L. Elsberg gave an account of the views at which he had arrived in making an histological investigation of the cartilages of the larynx, with regard to the structure of hyaline cartilage. As the result of his investigations, Dr. Elsberg was not only able to confirm the views of Heitzman and others, that there are cilia-like offshoots or prolongations of the substance of the cartilage-corpuscles penetrating into the basis substance, but had been able to satisfy himself that these offshoots form a connecting reticulum through the basis substance, and that there exist in this network masses of living matter. Hyaline cartilate is, therefore, a mass of living matter, in which blocks of basis substance are imbedded; and Dr. Elsberg believed that the communication of these protoplasmic processes with each other and with the surrounding tissues permit nutrition to be carried on without the intervention of 'juice-canals'.

4. *Sabourin on the Biliary Lobule.*—Dr. Ch. Sabourin (*Le Progrès Méd.*, No. 2, p. 21) describes the biliary lobule as quite distinct from the generally received notion of the hepatic acini bounded by the portal spaces, and having the radicles of the hepatic vein at their centres. The biliary lobule, according to M. Sabourin, is pyramidal in shape, its base is directed towards the portal spaces, while the hepatic radicles are at its angles. He gives no proof of this statement, but says it rests upon certain pathological observations, which he promises to publish elsewhere.

Robert Saundby, M.D.

5. *Raab on the Anatomy of the Arteries of the Palm of the Hand.*—Raab (*Wiener Med. Jahrb.*, 1880, s. 179) found in 108 upper extremities eight with abnormalities of the arterial system. Every abnormal condition of the course of the ulnar or the radial artery was combined with abnormalities in the palmar arch. He describes three cases, viz.: 1. High origin and superficial course of the radial artery, and anastomosis between the radial and ulnar above the transverse carpal ligament; 2. High division of the radial (10 centimètres above the carpus), the volar branch of which inosculated with the ulnar above the carpal joint; 3. High division of the brachial artery, with anastomosis of the radial and ulnar above the transverse carpal ligament.

6. *Sinéty on Ciliated Cells of the Ovary.*—In the Société de Biologie, in the meeting held December 17th, 1881 (*La Tribune Méd.*), M. Sinéty announced that he had found ciliated cells on the surface of a normal human ovary. As the ovary of the other side was cystic, and as ciliated cells are often found in ovaries which are pathologically changed, he thought that the presence of these cells might indicate a pathological condition. But sections of the ovary showed no pathological condition whatever, and scrapings from the surface showed large ciliated cells. This fact is of importance, for these cilia must assist in transporting the ovum to the fimbriated extremity of the Fallopian tube, after the rupture of a Graafian follicle. The fact that these cells had previously been overlooked by investigators, was explained by the speaker as due to the faulty methods of examination. M. Duval spoke of the importance of the discovery, and said that it confirmed his views, previously expressed, as to the movement of the ovum in the lower animals. He thought it not improbable that the cilia were developed on the cells at the menstrual epoch, and afterwards disappeared until the next menstrual period.

7. *Strauch on the Human Sternum.*—Measurements made by this observer (*Inaug. Dissert.*, Dorpat, 1881) give the following results. 1. The male sternum is in general longer than the female. 2. The length of the male sternum varies in 60 per cent. of the cases from 8 inches to 9.2 inches; that of the female, in 66 per cent. of the cases, from 7.4 inches to 8.4 inches. The average difference in length between the male and female sternum is about four-fifths of an inch. 3. This difference depends mainly on the length of the gladiolus; the manubrium and ensiform cartilage being nearly equal in male and female. 4. The manubrium is to the gladiolus in length as 1:2.6 in males, and as 1:1.4 in females, giving the female sternum, therefore, a shorter and plumper look than the male sternum.

8. *Maier on the Ganglia in the Uriniferous System of Man and some Animals.*—Professor Maier finds (Virchow's *Archiv*, Band lxxxv, pp. 49-70) in all parts beyond the kidney of the uriniferous system of man and some other mammals, uninterrupted nervous expansions lying in the mucous and muscular coats. These expansions do not form a close network, but rather frequent anastomoses uniting the superficial and deeper parts, and everywhere provided with ganglia. These ganglia he finds to have a very various relation to the nerves, some lateral, covered only by perineurium; others in the centre of nerve-bundles, or at a bifurcation. The cells are unipolar, bipolar, some apparently apolar. The nerve-fibres with which they are connected are mainly of the pale variety.

JAMES ANDERSON, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BARNES, ROBERT.—Antiseptic Midwifery and Septicæmia in Childhood. (*American Jour. of Obstetries*, Jan. 1882.)

2. EMMET.—Notes of one hundred and thirteen Cases of Operation for Laceration of the Cervix Uteri. (*Ibid.*)

3. HEGAR.—On Capillary Drainage of the Abdominal Cavity. (*Centralbl. für Gynäkol.*, den 18 Feb. 1882.)

4. HUNTER, J. B.—The Surgical Aspects of Gynæcology. (*The New York Med. Jour. and Obstetric Review*, Feb. 1882.)

5. MILSOM, C.—Clinical Studies on Uterine Involution. (*Thèse de Paris*, 1881.)

6. NEGRI, P.—Some Considerations on Labour in Face-Presentations. (*Annali di Ostet., Ginecol., e Pediatria*, Gennaio, 1882.)

7. OLIVIER, AD.—The Employment of Ignipuncture in the Treatment of Parenchymatous Chronic Metritis. (*Ann. de Gynécol.*, Feb. 1882.)

8. PALADINO.—Anatomy of the Ovaries. (*Giornale Internaz. delle Scienze Med.*, anno iii.)

9. PERUZZI, D.—A Successful Case of Double Ovariotomy. (*Raccoglitore Med.*, 1881.)

10. PILAT.—Dystocia from Membranous Occlusion of the Vagina. (*Ann. de Gynécol.*, Feb. 1882.)

11. SCHWARZ.—Experiments on the Working of Liquor Ferri Sesquichlorati, Tincture of Iodine, and Strong Solution of Nitrate of Silver, in Direct Application to the Abdominal Cavity. (*Centralbl. für Gynäkol.*, Feb. 11, 1882.)

12. TAYLOR, J. E.—Lupus of the Vulva. (*American Gynæcol Soc.*, 1881.)

13. WIEDOW.—Castration in Uterine Fibroma. (*Centralbl. für Gynäkol.*, Feb. 11, 1882.)

14. QUEIREL.—Hydrorrhœa during Pregnancy. (*Marseille Med.*)

15. WEBER.—The Influence of the Bath-Cure of Staraja Russa on Fibromata of the Uterus. (*St. Petersburger Med. Woch.*, Nov. 5, 1881.)

1. *Barnes on Antiseptic Midwifery.*—Dr. Barnes states that antiseptic treatment should be begun early. Indeed, with the conduct of labour, the first great point is to secure firm contraction of the uterus. The pad and binder are useful. The compression exerted upon the abdomen and pelvis not only tends to promote uterine contraction, but it counteracts the aspiration or suction-force which tends to draw air, one of the factors of decomposition, into the uterus. It opposes centripetal osmosis. The day after labour, it is useful to give an aperient. It commonly happens that in the effort of defecation the uterus, compressed and sharing in the diastaltic action, expels a clot. It then contracts more effectually. The maintenance of contraction is efficiently aided by the action of oxytocics. Dr. Barnes always gives after every labour a mixture of quinine, ergot, and digitalis, three times daily, continued for two or three weeks. The effect in contracting the uterus is remarkable. It is shutting the gate in the face of the enemy. The next thing is to wash out the uterus. Plain tepid water may serve the purpose, but a solution of carbolic acid, 1 in 50, is better. This should be done once or twice a day from the second day. On the first day, there is little risk of absorption. Should there be the slightest rise of temperature and pulse, this intra-uterine injection is imperative. We ought not to refer to intra-uterine injections without reference to Harvey the Immortal, who thus cured a lady in imminent danger of septicæmia. Carbolic solution should be kept in the room. The catheter should be kept in it. If sponges are used they should be kept in the solution. It is probable that sulphurous acid may be found even better than carbolic acid as an antiseptic. Dutrochet, in his investigations on osmosis, found that the slightest trace of sulphurous acid stopped osmosis. It may be used in the proportion of 1 in 40. Whilst taking care to exclude foul stuff from the genital canal, we must be careful to exclude foul air from the lungs and skin. When the sun shines, open the windows. At night, especially, a fire is often the condition of good ventilation. It is of the utmost importance to guard against chill or any check upon the due action of the skin, lungs, kidneys, and intestinal canal; that is, maintain in due working order the excretory organs. Dr. Goodell has insisted upon the drainage of the uterus as a means of getting rid of noxious stuff. The principle is admirable. There is no doubt that, in the ordinary recumbent posture, blood and discharges are apt to collect in the lax uterus and vagina. Dr. Goodell recommends that the patient should at times be raised into the sitting posture to allow the fluid to drain off. Where a woman is strong, and after a few days, this plan may perhaps be adopted without disadvantage; but in the weakly subjects most prone to septicæmia, especially after hæmorrhage, sitting up has been followed by syncope and sudden death. If firm pressure be maintained upon the hypogastrium, and antiseptic irrigations be duly observed, drainage is secured. At the same time, if the bed be properly made, so that the head and shoulders are kept at a slightly higher level than the pelvis, drainage will be fairly accomplished. The dorsal decubitus is more favourable to drainage than the lateral. An effective barrier against the ingestion of noxious stuff from the parturient canal, is to supply the system with healthy nutriment by the stomach. The more the system is supplied in this way, the less will it absorb from vicious sources. Dr. Oldham was one of the first to lead the revolt against the old fashion of starving

on gruel during the first week; but it is easy to err in reaction. During the first two days, the system craves rest as well as food. Food that is not easily assimilable is apt to load the stomach, lying undigested or badly digested. As regards antiseptic midwifery in lying-in hospitals, the dangers gather round the patients in an accelerating ratio. If the history of many lying-in hospitals could be fairly written, we should have a terrible record of lives sacrificed to ignorance, to reckless disregard of medical authority, to architectural folly, to maladministration, to scandalous experimentation of fanciful crotchets. Uninformed benevolence, overriding the practical benevolence of science, has always been prolific of disaster. Nowhere can it count more victims than in lying-in hospitals. The first imperative condition for the safety of women in lying-in hospitals is the absolute single authority of the physician. The description given by Dr. Fancourt Barnes of the system in force at the British Lying-in Hospital is a practical illustration of the rules necessary to secure safety. Every patient is delivered under the carbolic spray. This disinfects nurses and pupils who are assisting, and prevents the entrance of germs or foul matter into the genital tract, at the moment when it is distended and opened by the passage of the child. All washings, syringings, and examinations, are done with carbolic solution. Carbolic spray of 1 in 80 is almost continuously playing in each ward. To secure contraction of the uterus, each patient has a mixture of quinine, ergot, and opium, three times a day, for the first week. Since instituting the above practice, he rarely finds any rise of temperature during the lying-in. We may thus hope to see the day when women can be delivered in lying-in hospitals as safely as in home practice.

2. *Emmet on Laceration of the Cervix Uteri.*—Dr. Emmet has had one hundred and thirteen cases of operation for laceration of the cervix without a death. Of these, ninety-nine were bilateral lacerations, three were on the right side alone, eight were on the left, and three were markedly stellate, involving three sides or more. The reason why these operations show such preponderance of bilateral laceration is simply this. In Dr. Emmet's experience, when one side alone is torn, the sound side acts so like a splint that the lips of the fissure are not liable to spread apart, and cause ectropion to a pathological degree. They, therefore, as a rule, do not need an operation. Of these cases, union wholly failed in two. In four, the union was partial; but in two of these, a suspicious-looking cervical growth had been previously removed. The number of cases in which the forceps had been used was not noted. He generally found that, when the rent was an unusually bad one, the perinæum was torn also, and that the labours had been instrumental. In six of these cases, both perinæum and cervix had to be operated on. In three of these, both lesions were operated on at one sitting. All were successful. Of the one hundred and thirteen cases, thirty-five were performed in the amphitheatre or the private operating-rooms of the hospital of the University of Pennsylvania, which is a general hospital. Of these, two had serious attacks of perimetritis and of parametritis, and two had slighter attacks, all due to hospitalism. They recovered, but in one the convalescence was delayed by the formation of two abscesses in the leg. In this case, the patient next to her broke out with erysipelas on the day of the operation. In the other bad case, an explosion of erysipelas took place on her face and trunk. Strange as it may seem, the union in all these cases was perfect. Dr. Emmet attributes this success to the fact that the stitches were not removed on the outbreak of the pelvic inflammation, but were allowed to remain a much longer time than usual. As the carbolic spray obscures vision in such operations, it is not resorted to, the only antiseptic means employed being a 2.5 per cent. solution of carbolic acid for the sponges. Vaginal injections of the same solution are repeated twice a day, until the stitches are removed. The same means were used in his private cases, and of these he had but two with any symptoms of inflammation. The attack was in each case mild and manageable, giving no anxiety whatever. Some who had remained sterile after the laceration speedily became pregnant again after the operation. Dr. Emmet is of opinion that the cervix should always be restored, whenever ectropion of the mucous membrane takes place and the glands of Naboth become enlarged.

5. *Milsom on Uterine Involution.*—Whilst *interne* at the Lyons Hospital, Dr. Milsom measured a large number of uteri from the day of delivery. He is of opinion that observation of the progressive diminution of the volume of the uterus is the only clinical method of following the course of involution. The old modes of measurement only give uncertain results. Abdominal palpation, as it only gives the height of the fundus above the pubic plane, and not above the superior strait, can yield useful results only on condition that the height of the uterus is noted in its relation to the transverse planes of the pelvis, and should be combined with the mensuration of the uterine cavity. The only exact means at our disposition for measuring at any given moment the volume of the uterus is the graduated hysterometer. In the appreciation, however, of the total volume, account must be taken of the thickness of the uterine walls, which varies during involution. Uterine catheterism should only be employed with reserve and prudence, and with strict antiseptic precautions. In these conditions, it presents no dangers, and may be practised from the fourth day, or even sooner, after delivery. The uterus is 13½ centimètres above the pubic plane twelve hours after labour. On the eleventh day, it is 5½ centimètres above the pubic plane. On the fourth day, the uterine cavity measures 14 centimètres; on the eleventh day, 10 centimètres. The daily diminution is 0.75 centimètre, but during the first three days the involution is more rapid than at a later period. The exact knowledge of the normal volume of the uterus on different days after labour might be of great value in medical jurisprudence. In this way the date of a labour might be fixed. Involution, as studied by catheterism, is slower in the cervix than in the body of the uterus. The cervical cavity measures 8 centimètres on the fourth day, and 6½ centimètres on the eleventh day. Whilst the uterus is undergoing involution, it does not preserve any fixed relation to the transverse planes of the pelvis. It suddenly goes down 1½ centimètres from the third to the fourth day, and nearly 2 centimètres from the fourth to the fifth day. Lastly, towards the ninth day it slightly rises. Involution is retarded by suckling. The uterine cavity on the eleventh day measures 10 centimètres in mothers who are suckling, whilst in those who have not suckled, it only measures 9.5 centimètres. Involution is a little quicker in multiparæ than in primiparæ. The rapidity of involution is most pro-

nounced in multiparæ who have not suckled. The length of labour has no influence on the progress of labour. Only after a tedious labour, the uterus remains larger during the first twenty-four hours. In labour at the seventh or eighth month, uterine involution presents the same phenomena that it does at term. The duration of the period of involution is very variable. From several catheterisations practised at a distant epoch from labour, Dr. Milsom concludes that it may last from eight to nine weeks in women who have not suckled, and that it may continue during ten or twelve weeks, and even more, in women who are suckling.

7. *Olivier on Ignipuncture in Chronic Parenchymatous Metritis.*—Dr. Olivier makes a variable number of punctures with the thermo-cautery into the cervix uteri, parallel with the axis of the uterine canal. The cautery is never pushed in to a less distance than 5 millimètres, and never more than 3 centimètres. The deeper the puncture, the more marked is the effect in producing contraction of the hypertrophy. FANCOURT BARNES, M.D.

14. *Queirel on Hydrorrhœa during Pregnancy.*—M. Queirel has published in the *Marseille Méd.* an interesting memoir, in which he studies the various elements of the still debated question of the nature of the watery discharges frequently occurring during pregnancy, and spoken of under the generic name of hydrorrhœa. He relates first two cases. In one, a multipara, six months advanced in pregnancy, there had been two effusions of colourless fluid. He was called after the third, which occurred during the night without conscious pain. From the odour, the marks on the linen, and the abundance of the loss, he had no doubt that this was a flow of amniotic fluid, although there was no commencing miscarriage. With prolonged repose and laudanum injections, the patient went on satisfactorily to full time, and was delivered of a healthy child. In the second case, a similar loss occurred at the fourth month, accompanied by abdominal pain and uterine colic. Rest and laudanum injections relieved the pain and arrested the loss. Similar phenomena reappeared and disappeared at the end of five weeks, but fifteen days afterwards the discharge recurred and was followed by abortion. The fœtus was six months old and well developed. M. Queirel points out that cases are reported under the name of hydrorrhœa which are of certainly different natures, and include the flow of fluids of a very different aspect, nature, and origin from amniotic fluid. In some cases, there is a rupture of the membranes from injury or severe contraction, chiefly occurring during the night. This form of rupture is usually followed by labour from six to nine weeks afterwards. The discharge in these cases should be called hydramniorrhœa. When the liquid which escapes presents somewhat of the character of the amniotic fluid and the flow is reproduced at regular intervals, and the pregnancy continues its regular course, the case is probably one of true hydrorrhœa; that is to say, a flow of serous fluid secreted by the maternal vessels and the external surface of the ovum. This is the theory of Naegelé. Exceptionally, the possibility may be admitted of a fluid furnished by an accidental cyst, by a twin ovum of which the product has been dissolved, or by the uterine glands of the cervix, true catarrh of the cervix. Finally, cases may be diagnosed which may be confounded with these, and are not the least important; that is to say, cases of incontinence of urine, or of vesico-vaginal fistula, and cases in which the fluid may come from the vulvar glands. The mistake of confounding the flow with escape of urine has, especially, often been committed. The following case observed by Magail deserves to be related as an example. A woman, in her first pregnancy, several times had watery discharges; she was, however, delivered at full term of a living child, and the hydrorrhœa continued after pregnancy. In the second pregnancy, the flow did not cease, and it was verified by several physicians whom she consulted. M. Depaul himself treated her for chronic affection of the uterus, and discovered only after several weeks of treatment that the fluid was furnished by the bladder. There was not, however, any vesico-vaginal fistula, but the anterior wall of the vagina was relaxed and ruptured on the middle of the vulva. There was a vaginal cystocele, with depression of the uterus. M. Magail relieved the infirmity by raising the uterus with the aid of tampons immersed in astringent fluid.

15. *Weber on the Influence of the Bath-Cure at Staraja Russa on Fibromata of the Uterus.*—Dr. F. Weber (*St. Petersburger Med. Woch.*, Nov. 5, 1881) says that, during the bath season of 1881, sixteen cases of fibro-myoma of the uterus were treated at Staraja Russa. The ages of the patients varied from 25 to 58 years—that of the greatest number was between 40 and 50. The duration of the ailments before the bath-cure varied from one and a half to thirty years. Of these only one, that of one and a half years, could be counted recent; four had suffered from twenty to thirty years; the remaining eleven cases were of five to twenty years' standing. The size of the tumours was also very various. In two instances they only reached the size of a hen's, and in four of a goose's egg; but in ten cases the tumour was much larger. In nine cases, there was only one tumour to be made out. In seven cases, again, the uterus had several fibromata. In one case only a peritoneal fibrous tumour was recognised; in ten cases the tumours were interstitial, and in four cases they were of both sorts. The influence of the bath-treatment on the volume of the tumours was not uniform, for in nine cases a diminution of bulk was distinctly recognisable, while in seven cases the volume was not diminished. No increase of the bulk of the fibroma was observed, but the size of the tumour varied with reference to menstruation, increasing in a marked degree before the period, and reaching its smallest size in the middle time between two periods. Cases of cavernous fibroma were much more liable to vary in bulk than those whose texture was firmer. In multiple fibromata, their different length of standing seemed to make them vary much in the same uterus. This increase and loss of bulk made it difficult to be sure whether such changes were permanent or only temporary. In some cases, the fibroma was complicated with perimetritic deposits and parametritic infiltrations, so that the diminution of the tumour must be, in these cases, ascribed to their absorption. Indeed, it is difficult to suppose that tumours of ten to thirty years' standing can be materially altered by a treatment of one to two months only. There are exceptions to this in cases complicated with pregnancy, in which, after delivery with involution of the uterus, marked diminution has taken place. In a case of that kind, sent to Staraja Russa, there was a mos marked diminution of size after six salt, seven mud and twenty-seven mixed baths of salt and pine-ex tract. In all the cases of fibroma, menorrhagia and uterine hæmorrhage occasionally occurred. The bath-cure operated on these symptoms dif-

ferently, according to the individuality of the patient; for, in eight cases, the menorrhagia was subdued; in two cases, again, there was exacerbation of it. Unexpected hæmorrhage occurred in five cases, in four of them just after the commencement of the mud-bath cure, and in one case after a fright. This season there were more hæmorrhages than last one. The hæmorrhages occurred chiefly in cases complicated with parametritis or perimetritis, which invited the more or less active use of the mud-baths. It is usual to commence, in ordinary uncomplicated fibromata of the uterus, with simple salt baths, and prolonged vaginal douches of the temperature of 86 deg. to 104 deg. To baths for nervous and anæmic patients, preparations of iron and of pine-extract were added; to those for persons of leucophlegmatic temperament, preparations of iodine. Usually, it is not advisable to proceed to mud-baths, as such concentrated baths are apt to induce hæmorrhage. When menorrhagia or metrorrhagia is coming on, hot salt-water douches of 110 deg. to 118 deg. operate as hæmostatics; the use of warm douches of 59 deg. to 101 deg., between the menstrual periods, served often to ward off menorrhagia. It is sometimes necessary during menorrhagia to replace the warm salt douches by plain hot-water ones, when the former are inclined to prove irritating, and, in some cases, indeed, to proceed to prolonged intra-uterine salt douches, if they be not contraindicated by any local conditions.—[It is interesting to observe the treatment of fibroma of the uterus in the centre of Russia, Staraja Russa being an analogue of Kreuznach.—*Rep.*] J. MACPHERSON, M.D.

DISEASES OF CHILDREN.

RECENT PAPERS.

1. KAULICH.—Therapeutic Observations on Typhoid Fever in Childhood. (*Jahr. für Kinderh.*, vol. xvii, part 1.)

2. VOTTELER.—On the Pulse and Temperature in Tubercular Meningitis of Children. (*Ibid.*)

3. KORMANN.—The History and Bibliography of Orthopædic Surgery to the year 1879. (*Ibid.*)

4. RUNGE.—'Navel-ill' in Children. (*Zeitschrift fur Gehbertshulfe und Gynäkol.*, vol. vi, part 1.)

5. CAMERER.—The Artificial Feeding of Children. (*Archiv für Kind.*, vol. ii, part 12.)

6. ALBRECHT.—Pilocarpin in Pertussis. (*Ibid.*)

7. PINSKER.—The Use of Salicylate of Soda in Childhood. (*Ibid.*)

8. GROSSMANN.—Ophthalmia Neonatorum and its Prevention. (*Brit. Med. Jour.*, Oct. 29, 1881.)

9. MARSH.—Remarks on Treatment of Spinal Caries in Childhood. (*Ibid.*, Nov. 12.)

10. BARLOW.—Hysterical Analgesia in Children. (*Ibid.*, Dec. 3.)

11. STOKES.—Excision of the Knee in Early Life. (*Ibid.*, Dec. 10.)

12. OWEN.—The Early Detection and Treatment of Disease of the Hip-Joint. (Paper read before the Harveian Society of London, Nov. 3, 1881.)

13. GODHART.—The Rheumatic Diathesis in Childhood. (*Guy's Hospital Reports*, 1881.)

14. QUINN.—On Cholera Infantum. (*American Practitioner*, Oct. 1881.)

15. PARROT.—On Two Cases of Enormous Hypertrophy of the Tongue, associated with Idiocy. (*Gaz. Méd. de Paris*, Dec. 10 and 17.)

CLINICAL RECORDS OF CHILDREN'S DISEASES.

Case of Acute Traumatic Tetanus in a girl aged 10 years: Onset of symptoms 13 days after injury to heel: excision of 1¼ inch of short saphenous nerve: Recovery. Mr. Swinford Edwards. (*St. Bartholomew's Hospital Reports*, 1881.)

A Fatal Case of Hæmophilia in a Boy aged 13 months: vaccinated at six months old: shortly after an attack of varicella: severe and increasing hæmorrhage from nose and mouth, at frequent intervals, for a month, ending in death: father and uncle bleeders: no history of tuberculosis. Dr. Hertzka, Vienna. (*Archiv für Kind.*, Band xvi, parts 8 and 9.)

Vesical Calculus in a Girl aged 3 years: removed by Bigelow's operation: Recovery. Mr. F. S. Edwards, West London Hospital. (*Lancet*, Oct. 1.)

Three Cases of Unusual Deformity of Anus in Children under 7 months old. Mr. Morgan, Hospital for Children, Great Ormond Street. (*Ibid.*, Oct. 22.)

Hydatid Tumour of Liver in a Child aged 4½ years: Successfully Treated by Aspiration. Dr. Edge, Manchester Southern Hospital. (*Ibid.*, Oct. 29.)

Three cases of Simple Atrophy of Optic Nerves in Children of same family. Mr. Higgens, Guy's Hospital. (*Ibid.*, Nov. 19.)

Strangulated Inguinal Hernia: Boy, aged 5 months: Operation: Recovery. Mr. Wright, Children's Hospital, Pendlebury. (*Ibid.*, Dec. 10.)

Acute Periostitis from Injury: Pyæmia: Death. (*Ibid.*)

Sarcomatous Tumours of the Cranial Bones: Child, aged 1 year. Mr. Treves, London Hospital. (*Ibid.*, Dec. 10.)

Two Fatal Cases of Tetanus Neonatorum; in Children aged 4 years and 7 days. Dr. E. Smith and Mr. Parker, East London Children's Hospital. (*Med. Times and Gaz.*, Nov. 26 and Dec. 3.)

Two Fatal Cases of Acute Endocarditis in Children 9 and 13 years. Dr. Ashby, Hospital for Children, Pendlebury. (*Ibid.*, Dec. 17.)

Subacute Bright's Disease in an Infant, 3 months old, from exposure to Cold: Recovery. Dr. J. M. Booth. (*Brit. Med. Jour.*, Oct. 15, 1881.)

Aphasia, with right-sided Convulsions and Paresis following a Blow on the Head, in a Child, aged 11 years: Recovery. Mr. C. Heath, University College Hospital. (*Ibid.*, Oct. 29.)

Necrosis of the Left Ischial Tuberosity: Girl, aged 7 years: Removal of sequestrum: Recovery. Mr. Rose, Royal Free Hospital. (*Ibid.*, Nov. 5.)

Removal of Os Calcis and Astragalus for Caries: aged 10 years. Mr. D. Fox, Manchester Southern Hospital. (*Ibid.*, Nov. 12.)

Hydrophobia: Boy, 5½ years: symptoms began a month after wound, which had been cauterised: Treated with tincture of cannabis Indica: Recovery. Mr. Ruxton. (*Ibid.*, Nov. 19.)

Scorbutic Spinal Hæmorrhage: Girl, aged 13 years: family history of consumption: Patient had suffered for some months with subacute pleuropneumonia, and for several weeks from recurring cutaneous ecchymoses: Spasms of lower limbs lasting some days: Marked aversion to vegetable diet: Treated successfully with lemon-juice and belladonna. Dr. P. Eade. (*Ibid.*)

Hydrophobia: Boy, aged 7 years: Symptoms began a month after wound, which had been cauterised: Treated with subcutaneous injections of morphia and atropia: Death. Mr. Savory, St. Bartholomew's Hospital. (*Ibid.*)

Fatal Case of Scarlet Fever from Hæmorrhage from the Throat: aged 4 years. Dr. Cattle. (*Ibid.*, Dec. 3.)

Excision of both Elbow-Joints: Boy, aged 10 years. Mr. Clement Lucas, Guy's Hospital. (*Ibid.*)

Dermoid Ovarian Tumour in Child, aged 7 years: Ovariotomy: Recovery. Mr. K. Thornton, Samaritan Hospital. (*Ibid.*, Dec. 10.)

Multiple Exostosis in an Imbecile Boy, aged 10 years: on ribs, pelvis, clavicles, scapulæ, and bones of extremities. Dr. Shuttleworth. (*Ibid.*, Dec. 17.)

Case of Addison's Disease in a Boy, aged 8 years, with Tubercular Disease of Lungs, of both Kidneys, and of Right Suprarenal Capsule. Mr. Wright. (*Ibid.*, Dec. 31.)

Two Cases of Calculus Vesicæ in Girls, aged 5 and 8 years: Successfully treated by rapid dilatation of the urethra. Mr. R. W. Parker, East London Hospital for Children. (*Med. Press and Circular*, Nov. 30)

CASES AND SPECIMENS OF CHILDREN'S DISEASES EXHIBITED AT SOCIETIES.

Pathological Society of London.—Nov. 1, Two Cases of Renal Tumours composed of striped muscle and sarcoma tissue, and reference to other cases: all fatal before age of 18 months. Mr. F. S. Eve and Dr. D. Williams.—Dec. 6, Case of Hæmophilia. Dr. W. Legg.—Dec. 20, Cirrhosis of Liver and Lung in Child, aged 13 years: no history of syphilis. Dr. Pye-Smith.

Royal Medical and Chirurgical Society.—Oct. 25, Cases of Gangrenous Eruption connected with Varicella and Vaccination. Mr. J. Hutchinson.—Nov. 8, Two Cases of Congenital Macrostoma, with Malformation of the Auricles and Auricular Appendages on the Cheeks. Mr. J. H. Morgan.

Clinical Society of London.—Nov. 11, Removal of Pebble, of the size of cherry-stone, from Right Bronchus by Tracheotomy, sixteen days after being swallowed: Recovery. Mr. C. Lucas.

Ophthalmological Society of Great Britain.—July 6, Intra-ocular Tumour: death 6 years after enucleation of diseased eye: Girl, aged 6 years. Mr. Spencer Watson.—Dec. 8, Case of Optic Neuritis in Chorea. Dr. Gowers.

Medical Society of London.—Nov. 14, Congenital Abscesses of both Eyes. Mr. Wordsworth.—Nov. 21, Congenital Luxation of both Knees and Double Club-Foot: four relatives born with talipes. Mr. H. F. Baker.—Nov. 28, Cranial Osteophytes in Congenital Syphilis. Dr. Crocker.

1. *Kaulich on Therapeutic Indications in Typhoid Fever in Childhood.*—The object of this communication is to show that in the majority of cases of typhoid fever in childhood the temperature is capable of being controlled by a systematic antipyretic treatment, under which at the same time the typhous symptoms for the most part disappear. Further, the early administration of nourishment is of no disadvantage, but tends to counteract the febrile loss of weight, and also to diminish the period of convalescence. The specific treatment advocated by Dr. Kaulich consists in giving large doses of quinine, and the application of the cold pack. The children, who varied in age from four to ten years, were treated on the following uniform plan. In the evening of the first day of the more rapid rise of temperature, they were packed in cold wet sheets; and this was repeated several times, until a perceptible fall in temperature was observed. This was followed by a dose of about eight grains of quinine, given in the form of powder. Should the next morning's temperature have fallen, it is sufficient only to repeat the packing, and this with the quinine may be continued for the next four days, when the child is in a better condition to take nourishment. A fall in the evening temperature should lead to a smaller dose of quinine, which, however, in severe cases might reach 30 grains. Dr. Kaulich claims for this procedure a lower death-rate, and a diminished chance of complications.

2. *Votteler on the Pulse and Temperature in Tubercular Meningitis of Children.*—The very vexed question of the relation between pulse and temperature in tubercular meningitis receives but scant attempt at answer in Dr. Votteler's paper, to which an article by Dr. Turin, noticed in this journal in August last, seems to have been the immediate incentive. The author bases his remarks upon the records of fourteen cases observed during life, together with the *post mortem* appearances, and appends a chart of the pulse and temperature curves, constructed upon two observations only *per diem*, some of them being remarkably deficient. Far from conclusively, these observations are regarded as showing that during the course of the disease there occurs a stage of variable duration, during which both pulse and temperature are depressed, subsequent to which both rise. This, however, can scarcely be regarded as novel. Dr. Votteler prefers to explain the depression and irregularity of the pulse as the result of pressure on the root of the vagus by the serous effusion into the ventricles, rather than by compression of the nerve-trunks by inflammatory exudation, since he has met with the disturbance of the pulse where no lymph existed. To the same cause also he considers the fall in temperature to be due; following in this respect the view advocated by Wood as to the production of fever. The pressure of the fluid in the fourth ventricle interfering with some centres which control both the production and the loss of heat, is considered as the more likely explanation of the temperature depression than the diminished oxydation consequent upon a diminished circulation. The acknowledged difficulty of constructing anything like a typical temperature-curve for this disease receives no attempt at solution in this paper.

4. *Runge on Navel-ill in Children.*—Hitherto the reports of cases of pyæmia which is known to occur in new-born infants, in connection with some affection of the navel, have been few and far between. Dr. Max Runge of Berlin has collected histories of forty-five cases, and the *post mortem* accounts of twenty-four. In every case there was inflammation of the umbilical arteries, the vein being healthy; and, in eight cases, this was the only morbid condition present. The author draws the following conclusions. Inflammation of the umbilical arteries is not in all cases a local disease tending to recovery; it may be of itself fatal, or may lead to death by pyæmia. He believes the process begins in the perivascular connective tissue of the remains of the umbilical cord, and then extends to the vessel, producing thrombosis. Death in no case occurred before the third day, and the majority of fatal cases occurred in prematurely born children. The diagnosis is exceedingly obscure, the disease in many cases not being suspected during life. Sometimes pus may be squeezed from the umbilicus, though this is not diagnostic, and the same may be said of jaundice. It was noticed that purulent ophthalmia was very prevalent when these cases of navel-disease occurred. The practical point seems to be that the portion of umbilical cord remaining attached to the infant should be kept as dry as possible, as thereby it becomes mummified without smell, and a powder composed of salicylic acid and starch is recommended as an application. Contact of the umbilicus or eyes of the infant with the maternal discharges should also be carefully avoided.

6. *Albrecht on Pilocarpine in Pertussis.*— Dr. Albrecht has found, from an experience of ten cases of whooping-cough in children between the ages of 1½ and 9 years, all of a marked scrofulous type, much benefit from muriate of pilocarpine given in small doses after every fit of coughing. To prevent

collapse, he advises that it should be given in a mixture containing a little brandy. Without claiming a specific character for the remedy, he asserts that it exercises a most beneficial influence during the most distressing period of the disease. After twenty-four hours of its administration, an obvious change for the better has taken place in the appearance of the mucous membrane of the throat, velum palati, and uvula, which become paler, less swollen, and moister; and laryngoscopic examination shows a similar improvement. The mucous secretion is less viscid, and the paroxysms of cough are less frequent and less severe, and, as a consequence, ulceration of the frænum linguæ does not occur. When the disease assumes the catarrhal character, the pilocarpine is given up, and cold compresses to the neck, with a drink of sweetened milk containing chlorate of potash, are used instead. As the whoop recurs, the pilocarpine may be again used.

7. *Pinsker on the Use of Salicylate of Soda in Children.*—Referring to salicylate of soda as an antipyretic, antizymotic, and antiseptic agent, it is chiefly of its use in the first named capacity that Dr. Pinsker writes. His conclusions are that this drug is a febrifuge which should be given in large doses, to be repeated with the increase of the pyrexia; that the immediate and remote ill effects, such as loss of appetite, nausea and vomiting, singing in the ears, giddiness, deafness, even the appearances of collapse at times, albuminuria, erythema, urticaria, and petechiæ, are oftenest seen when the drug is impure; that in such diseases as diphtheria, pertussis, and typhoid fever it exerts very little effect on the morbid process; and, for the last mentioned, the author prefers quinine, since the irritation and corrosion produced by the salicylate, especially when impure, may lead to perforation of the intestinal ulcers; and, lastly, that while useless in intermittent fevers, it is a specific in acute rheumatism. The author found in the course of experiments on himself that it was most rapidly excreted, it being detected in the urine by its deep violet colour, with sesquichloride of iron, an hour after ingestion.

8. *Grossmann on Ophthalmia Neonatorum.*—There can be no doubt, says Dr. Grossman, at the present time, that the real and only cause of ophthalmia neonatorum, which produces 60 to 75 per cent. of the cases of blind asylums, is the infection from the secretion of the maternal passage during or shortly after birth. These secretions need not of necessity be purulent. Those apparently normal are almost equally infectious. The period of incubation after infection is three or four days; never less, often longer. Owing to the extremely serious results when once the disease has started, it is in prevention rather than in cure that most has to be done. The local treatment of the maternal passage, so that at the time of confinement there should be no infective matter present, has been tried with success. But far more satisfactory are the results that have followed the practice of disinfecting the eyes of all new-born children, without exception, with a 2 per cent. solution of carbolic acid; in those cases where a fluor albus existed, applying the treatment immediately after the birth of the head, even before the body was born completely. The eyelids, both outside and in the conjunctival surface, should be washed with the solution three times daily for the first two days of life; and should the mother have had a very strong vaginal catarrh, it is well to pad the child's eyes between the times of cleaning with a cotton-wool pad, dipped in the same lotion and renewed every half hour.

9. *Marsh on the Treatment of Spinal Caries in Childhood.*—Mr. Howard Marsh considers that the time has now arrived when the relative merits of the two different methods of treatment of caries of the spine in childhood (viz., strict confinement to the horizontal posture, and the plaster-of-Paris jacket and jury-mast) may be compared. On *à priori* grounds, he is of opinion that the jacket does not possess the advantages that have been claimed for it. He denies its efficacy in removing the superincumbent weight from the spine at the point of disease, since in children under seven years old the circumference of the thorax exceeds that of the pelvis, and hence the latter cannot afford the jacket an efficient base on which to rest, while it transmits the weight of all the parts appended to the upper part of the spinal column. Remembering also the tendency of the column to fall forward when diseased, there is a greater demand for a firm *point d'appui* in front, and this the pubic symphysis is ill adapted to afford, and the anterior superior spines and crests of the ilia are no better. Besides showing that no thoroughly efficient base can be obtained for the support of the weight which the jacket is required to transmit, Mr. Marsh goes on to protest against the propriety of the accurate moulding of the jacket to the surface that Dr. Sayre describes, and even denies that it ever does so closely fit as we are told it ought to do. The object to be aimed at is to moderate the mutual pressure of the opposed surfaces, rather than to completely separate them. And if the support is to be adequate, it must act within the tenth of an inch; that is, if the jacket yield by so much as this, pressure at the seat of disease returns, and the instrument loses its effect. Such a degree of accuracy the apparatus does not permit. When the child that is fitted with a jacket moves about and stoops, it is the jacket and not the spine that is passive, the former being added to the weight which the latter is called upon to raise; and hence it is impossible to consider either the spine as at rest, or that intervertebral pressure is prevented by the use of the instrument. Mr. Marsh's practical experience at St. Bartholomew's and the Children's Hospitals bears out these views. Here and there, he has met with cases in which recovery with more or less deformity has ensued; but he believes they are instances where the disease shows a tendency towards spontaneous repair. But he cannot mention any instance in which, even when the jacket was applied in the early stage, the arrest of the disease and its final cure could be attributed to this method of treatment. The value of the jacket must not be altogether estimated by the relief of pain which doubtless it frequently affords; since it does so, not by complete removal of intervertebral pressure and keeping the spine at rest, but because it steadies the column, and restrains both sudden and extensive movements either forward or laterally. Owing to the constant liability of the straps to become loose, Mr. Marsh regards the jury-mast as practically useless. In default, therefore, he is forced to the conclusion that the best method at present known for the treatment of spinal caries is complete recumbency for from six to eighteen months, or even longer. He considers the failure of general health from confinement as having been greatly exaggerated, and that bed-sores should not occur with proper nursing.

10. *Barlow on Hysterical Analgesia in Children.*

—Dr. Barlow records eight cases, showing that absence or deficiency of response to stimuli, which in healthy people would be painful, is not confined to young women, but also occurs in children. The analgesia was general, though not uniformly distributed, and was more marked in the limbs than on the face. Six of the cases were girls, and the youngest of the series was two years and nine months, and the eldest eleven and a half years. In all, there were symptoms pointing to hysteria; and in most there were fits, which were never unilateral, and not positively attended with loss of consciousness. The author considers that they support the view, that in the hysterical neurosis there is a torpid condition of the sensory part of the brain, which in extreme cases may involve the centres of special sense, and in very slight cases may present only a blunting in the appreciation of ordinarily painful impressions. Dr. Barlow regards the existence of analgesia as a valuable aid to the diagnosis of hysteria, to be treated by well regulated exercise of mind and body.

11. *Stokes on Excision of the Knee in Early Life.*—In reference to excision of the knee in early life, Professor Stokes lays down the following propositions. 1. The operation should not be looked upon as a last resource, but should be undertaken, if possible, before any profound organic changes take place. 2. Expectant treatment, to be efficient, must be undertaken at an early stage of the disease, and extend over a period of at least two years. 3. No better result than ankylosis can be looked for by this method. 4. In a patient with a predisposition to secondary tuberculous developments, the possibility of the recurrence of the disease after expectant treatment must be borne in mind. 5. In cases attended with prolonged suppuration, the chances of the occurrence of visceral, especially renal, disease must not be lost sight of. 6. Where the skin is unbroken, the disease limited, an efficient method of fixation applied, and a rigid system of antiseptic dressing of the wound adopted, primary union may, in the majority of cases, be anticipated. 7. When these latter conditions are fulfilled, excision of the knee-joint cannot be longer regarded as the formidable procedure it was formerly held to be. 8. The alleged unfavourable results of excision of the knee-joint in early life are opposed to more extended clinical experience.

12. *Owen on the Detection and Treatment of Diseases of the Hip-Joint.*—Two points in respect to morbus coxæ are most emphatically insisted on by Mr. Owen, viz., the necessity of immediate recognition of the condition of an affected joint, since it is in the earliest days that treatment is most effectual; and, secondly, that this treatment should primarily consist of the most absolute rest. He strongly condemns the indifference often displayed by surgeons in the early days of the disease, when prompt and determined treatment is necessary. That many children who are allowed to run or hop about recover, he regards as due to their excellent reparative powers, in spite of their unfavourable condition; but while many do recover, others, less favoured, who are by no means scrofulous, become the subjects of rapidly advancing joint-disease. The points on which he lays most stress in detecting the affection, are not the existence of pain and stiffness in the hip or knee, nor the limping gait, nor even the pain elicited by striking the heel or great trochanter, since these signs are insufficient to distinguish the malady in question from others. He looks rather to the obliteration of the fold of the groin caused by the distension of the capsule, and the flexion of the thigh on the abdomen, whereby the tension of the joint and the pain are diminished. Any attempt to straighten the limb is effectually prevented by forcible contractions of every muscle towards the front of the joint. The appearance of extension that does follow steady manipulation is not real, and is the result of a tilting forward of the pelvis and an arching of the loins, the relative position of the os innominatum and the femur being never once altered. Mr. Owen considers that, when the child is lying supine, the amount of the deformity may be estimated by the extent of arching of the loin, the lordosis being the mechanical compensation for the ilio-femoral trouble. Though sometimes associated with psoas abscess, this sign is of especial value in the diagnosis of hip-disease, which may be further supported by pressure over the front of the joint, or rotation of the thigh outwards, by which means the intra-articular pressure is increased, and signs of pain elicited. The most valuable signs noticed posteriorly are a greater width of buttock on the affected side, an intolerance to the pressure of the finger in the interval between the ischial tuberosity and the great trochanter, and a change in the arrangement of the gluteal folds. For treatment, perfect rest, with a Thomas's splint, may be sufficient; or extension by weight and pulley, traction being carefully kept in the axis of the femur, and the recumbent posture rigorously maintained, may be previously carried out. The author is opposed to counter-irritants in the earliest stages, but considers the application of two or three leeches over the acutely inflamed joint very judicious.

13. *Goodhart on the Rheumatic Diathesis in Childhood.*—Dr. Goodhart's paper, in the *Guy's Hospital Reports* for 1881, is a valuable contribution of a statistical character to our knowledge of the rheumatic diathesis. His results are founded upon a large number of cases observed by himself both at Guy's and the Evelina Hospitals; and he has taken care to exclude all references to mere vague rheumatic pains, and has only accepted definite rheumatic complaints. The conditions that he finds associated with a rheumatic strain are acute rheumatism, heart-disease, chorea, headache, night-terrors, nocturnal incontinence of urine, and other neuro-muscular derangements. That is to say, a large proportion of children suffering from these maladies have definite histories of rheumatic antecedents of some sort. The proportion, as regards acute rheumatism, heart-disease, and chorea, amounts in Dr. Goodhart's cases to two-thirds. His inquiries tend to show 'that parents who have had rheumatic fever transmit to their offspring a something, a constitution which tends to show itself in various ways, sometimes by acute rheumatism, sometimes by the slow production of endocardial thickening and valvular disease, sometimes by bad headaches, sometimes by obstinate anæmia, sometimes by irregularities of muscular action, such as chorea, occasionally by epilepsy, by abdominal convulsions, or, perhaps, it may be as well to adopt Charcot's term as a general one, and call all such *crises gastriques;* sometimes by a more general but persistent low tone of nervous system, such as may happen temporarily to anyone when below par, but is then speedily recovered from.' Further, the author is led to see indications for ascribing a neurotic origin for rheumatism, as has been supposed for gout, and scarcely less probably for osteo-arthritis. These three diseases, doubtless 'distinct in the individual, are very possibly modifi-

cations or varieties of some common ancestral, less specialised type, which, in the process of evolution, either of the disease or the family, has given rise to all'.

16. *Parrot on Two Cases of Enormous Hypertrophy of the Tongue associated with Idiocy.*—The disease, which is the subject of a clinical lecture by Professor Parrot, and to which the names *megaloglossia*, *glossoptosis*, and *glossomégalie* have been applied, is of extreme rarity, only two cases having fallen under the author's notice. Of these, one died at 4½ years, a *post mortem* examination being made; the other, aged 2 years, was still under observation. From them, the following description of the malady may be given. The most prominent feature is the prolapse of the tongue, which is enormously enlarged in every direction, of a deep violet colour, and covered with a thick whitish coating, with the veins of the frænum much developed. Swelling of the tongue may be due to different causes, such as glossitis, certain poisons, such as mercury, or the stings of insects; but neither these, nor the temporary congestion which may occur from convulsions or whooping-cough, produce the condition under consideration, which is to be regarded as a congenital malformation, which increases after birth. The protruded organ becomes indented and even ulcerated by the teeth, which themselves are gradually pushed forwards, laid bare, and become carious. The jaw undergoes a species of atrophy, the saliva continuously flows from the mouth, the lower lip becomes thickened and ulcerated, and the dragging forward of the larynx and velum palati by the weight of the tongue renders suction, mastication, and deglutition, difficult, thereby interfering with the general nutrition. Whilst some regard the morbid condition as due to hypertrophy of the lingual muscles, others, as Virchow and Billroth, explain it as the effect of an over-development of the lymphatics. This deformity seems to be specially associated with certain other bodily disproportions; thus the trunk is much longer and larger relatively to the limbs than normal, and these are short and thick-set, the legs appearing bowed from the enormous muscular development on the hinder and outer sides. The hands and feet are large, thick, and purple. Notwithstanding the muscular development, the two-year-old child could not walk, had no teeth, was markedly prognathous, with the physiognomy of an idiot; it had an unclosed fontanelle, a cardiac murmur, and an umbilical hernia. Even the elder child, though possessing all the temporary teeth except the lower canines, resembled the other in being unable to walk, and in presenting a similar murmur and hernia. The *post mortem* examination of the latter showed the entire brain to weigh only 755 grammes (26.5 ounces), the normal weight at that age being 1,190 grammes (42 ounces). No naked eye lesions were noticeable in the brain or spinal cord. The heart weighed 55 grammes (1¾ ounces), and was remarkable for its conical form and for the predominance in size of the left ventricle; the aortic orifice was narrowed by thickened and rigid valves, while the vessel itself was atheromatous; the pulmonary cusps were also thickened. The tongue weighed 46 grammes; the kidneys were healthy; and the muscles of normal appearance. One of the most striking features of the disease is the coincidence of arrest in the development of the brain; and M. Brisson has met with the deformity in anencephalous monsters. Cretins, also, whose cerebral deficiency is undoubted, are characterised by a thick pendant lower lip, large swollen tongue, big lower jaw which, extending beyond the upper, gives a bestial expression, whilst their teeth are wide apart and carious, the permanent ones seldom replacing the milk-set. Whether one and the same cause have brought about the cerebral atrophy and lingual hypertrophy, or whether the tongue has grown at the expense of the deficient brain, and to what extent the imperfectly developed heart may lead to this condition, are questions still unanswered.

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SYPHILOGRAPHY.

RECENT PAPERS.

1. Martineau.—On Subcutaneous Injection of Mercurialised and Ammoniated Peptone in Syphilis. (*L'Union Méd.*, Nos. 99 *et seq.*, 1881.)

2. Parrot.—Syphilitic Affections of the Teeth in Inherited Syphilis. (*Gaz. des Hôp.*, No. 78, 1881.)

3. Reclus.—On Suppurating Gumma of the Testis. (*Gaz. Hebdom.*, No. 36, 1881.)

4. Finger.—On the Constant Occurrence of Nervous Disturbance during the Exanthem Period of Secondary Syphilis. (*Vierteljr. für Derm. und Syphilis*, Heft 2 und 3, 1881.)

5. Chvostek.—On Syphilitic Disease of the Liver. (*Ibid.*)

6. Mansurrow.—On Syphilis of the Fibrous Tissues and Sheaths of Tendons. (*Ibid.*)

7. Kassowitz.—Syphilis and Rickets. (*Wiener Med. Blätter*, No. 40 *et seq.*, 1881.)

8. Bull.—Lesions of the Orbital Walls and Contents due to Syphilis. (*New York Med. Gaz.*, Nov. 5, 1881.)

9. Robinson.—Bromine Topically in Chancroids and Chronic Ulcers. (*Ibid.*, p. 423.)

10. Baumgarten.—On Syphilitic Gummatous Disease of the Brain and Spinal Cord, especially of the Cerebral Vessels, and its Relation to the Corresponding Tubercular Affections. (Virchow's *Archiv*, Nov. 1881, p. 179.)

11. Thomann.—On the Subcutaneous Injection of Iodoform in Syphilis. (*Centralbl. für die Med. Wiss.*, No. 44, 1881.)

12. Martineau.—The Propagation and Prevention of Syphilis. (*L'Union Méd.*, Nos. 48, *et seq.*, 1881.)

13. Petersen.—The Treatment of Suppurating Buboes. (*St. Petersburg Med. Woch.*, No. 52, 1881.)

14. Hill.—On a case of Linear Rectotomy for Syphilitic Stricture of the Rectum. (*Brit. Med. Jour.*, Dec. 24, 1881.)

15. Neumann.—A case of Soft Chancre in the Rectum. (*Allgem. Wien. Med. Zeitung*, No. 49, 1881.)

16. Broadbent.—Syphilitic Pachymeningitis of the Cerebellar Fossa. (*Lancet*, Feb. 4, 1882.)

4. *Finger on the Constant Occurrence of Nervous Disturbance during the Exanthem Period of Secondary Syphilis.*—In this paper (*Vierteljahr. für Derm. und Syphilis*, 2 und 3 Heft, 1881), Dr. E. Finger gives an account of certain experiments made on syphilitic subjects in Zeissl's wards with regard to the skin and tendon-reflex activity during the early secondary period. The author experimented altogether on fifty patients; thirty-seven of these (twenty-eight males and nine females) came under observation between three and six weeks after contagion. The remaining thirteen (nine males and four females) were admitted shortly before the appearance of the general exanthem, or with the eruption already present. The patients were examined daily, or every second or third day, during varying periods, of which the length is not exactly stated, but which usually did not extend beyond the fading of the eruption as

the patients usually left the hospital at that time. The chief points to which attention was paid were the reflex irritability of the abdominal wall, the cremaster-reflex, and the plantar-reflex, as well as the knee, ankle, and elbow-phenomena. In order to arrive at some sort of standard of comparison, the author began by testing a number of non-syphilitic and comparatively healthy patients, until by practice he considered he was able to exercise a fairly uniform degree of force, and to roughly group the amount of reflex irritation thus produced under six heads. Thus, the numeral '0' was made to represent absence of reflex movement, while '5' indicated the maximum, the intermediate grades being classed under one or other of the intervening numbers, according to their intensity. Twenty of the cases examined are tabulated according to this scheme, which Dr. Finger acknowledges to be a rough and imperfect one; but he thinks the general results worthy of record, because of their comparative uniformity. Thus, in all the cases there was an increase, sometimes very marked, both of the skin and tendon-reflex irritability immediately before and at the time of appearance of the first exanthem. This was soon followed by decreased irritability, often to an extent much below the normal state; while in some cases reflex phenomena were temporarily absent altogether. After this, the normal condition was again reached very gradually, generally, indeed, only several weeks after the fading of the rash. From this general rule, however, there were many departures. In women, for example, the fluctuations were seldom so well marked or so typical as in men. In those cases, again, in which the eruption did not come out generally within a few days, but appeared irregularly in crops, the reflex irritability was modified, in that the irritability of the various regions differed in degree at a given time, the reflex activity being increased in one region, and perhaps decreased, or even absent, in others. When a recurrence of the rash took place some time after the general outbreak, each recurrence was ushered in by a rapid increase of reflex irritability, which as quickly declined again when the eruption had fully developed. The increased irritability was only partial in many cases, and connected with the region in which the eruption recurred. For example, a crop of papules on the scrotum was attended by increased cremaster-reflex only, and a case of plantar psoriasis by exaggerated plantar reflex. Specific treatment did not appear to modify the course of events materially as regards reflex irritability. The movements excited were usually equal on both sides of the body, and in the tables the two sides are included under one heading. In some cases, however, a marked difference was found. Thus, in a case of psoriasis plantaris of the right foot, exaggerated cremaster-reflex, knee, and ankle phenomena were present only on the corresponding side of the body, and subsided after the eruption had faded. About a week later, the left sole became affected by the eruption, which was similarly accompanied by increased reflex irritability on the left side of the body.

5. *Chvostek on Syphilitic Disease of the Liver.*—In a long communication to the *Vierteljahr. für Derm. und Syphil.*, 2 und 3 Heft, 1881, Dr. Chvostek of Vienna gives an account of the whole subject of syphilis of the liver, illustrating his paper with particulars of nineteen cases observed by himself in hospital practice. Twelve of the cases, all males, are given in detail; three are only briefly reported, and the remaining four have already been published in other journals. The period of the disease at which the visceral affection occurred was not ascertained in 8 cases; but the interval after the primary sore was 2 years in 2 cases; 4 years in one case; 9 years in 2 cases; 14 years in 2; and 15, 21, 24, and 40 years respectively in the remaining 4 cases. Two of the patients were between 21 and 30 years of age; 6 between 31 and 40; 6 between 41 and 50; 3 between 51 and 60; and 2 between 61 and 70. The result was fatal in 16. One patient improved considerably under treatment, and two are reported as having recovered. *Pathological Anatomy.* Syphilis may affect the liver in three ways: 1. *Amyloid Degeneration;* 2. *Perihepatitis*, which usually leads to thickening of the capsule and adhesions to neighbouring parts. This is usually associated with syphilis of the substance of the organ, but in some rare cases precedes it, as the author thinks was the case in two of his nineteen examples. 3. *Syphilitic Hepatitis.* This is usually divided into a diffused form (diffused interstitial syphilitic inflammation) and a circumscribed form (gumma, or syphiloma of the liver). The diffused form is most common in syphilitic children who are stillborn or die soon after birth. Four of the cases showed this change. The circumscribed form is more frequent than the diffused. Gummata were found in two cases. In four cases, the liver was puckered, and its surface lobulated from cicatricial contraction following degeneration of the gummata. In two cases, the capsule of the liver was much thickened at the site of the contracted portions. In three cases, the portal vein was compressed at the transverse fissure, once by enlarged glands, once by cicatricial contraction, and in the third case, obstruction was due to both these causes combined. *Symptoms.* These are frequently so vague that the disease is overlooked or mistaken during life. In one case, hard knobs could be felt on the suface of the liver. In two cases, lobulation and shrinkage occurred while the patient was under observation. Ascites was present in twelve of the nineteen cases. In two, it was not connected with the hepatic disease; in three, it was partly due to compression of branches of the portal vein, and partly to Bright's disease; in four, it was due solely to compression of the portal branches; and in three to pressure on the main trunk of the vein at the transverse fissure. Of these last seven cases, paracentesis was required in five. In only three of the seven was the liver diminished in size; in three, it was considerably enlarged, and in one was of moderate size. Enlargement of the spleen was present in twelve cases. In five of these, it was due to syphilis alone; in five, to syphilitic disease and portal obstruction in consequence of the liver disease; in three, to obstruction of the circulation alone; and in one, to congestion following pneumonia and pericarditis. In one case, the spleen contained gummata. Jaundice occurred in nine of the cases. In three, the jaundice was very slight, and in one of these pneumonia was also present; in one, the skin was only slightly yellow, but the urine contained a considerable quantity of bile; in three others, the jaundice was slight, gall-stones being also present in one; in the remaining two instances, jaundice was well marked, and in one was due to pressure on the bile-ducts by enlarged glands and thickening of the capsule, and in the other, to obstructed circulation connected with disease of the thoracic organs. *Course and Duration.* This was not known in nine cases. In seven, the duration was about 4½, 5, 6, 7, 9, 10, and 11 months respec-

tively; in two, about fifteen months; and in one about eighteen months. *Terminations.* One patient recovered under iodide of potassium. Paracentesis was performed eleven times in five months in this case, and the patient was still in good health fifteen years afterwards. Another case the author is doubtful whether or not to call one of recovery, but the patient almost regained his health under specific treatment. Tapping was twice necessary in this case. In a third case, again, marked improvement took place under treatment. Sixteen patients died, death being attributed to pneumonia in three; to pneumonia and pericarditis in one; to tubercular disease in one; to bronchiectasis in one; to retro-pharyngeal abscess and stricture of the trachea in one; to peritonitis in two; to Bright's disease in one; to diphtheria in one; to thrombosis of cerebral sinus and pachymeningitis in one; and to exhaustion in three cases, while one patient died suddenly of anæmia of the brain. *Complications* (due to syphilis). The *Spleen* (already mentioned). The *Kidneys* showed chronic Bright's disease in the stage of fatty degeneration in two cases, granular atrophy in two cases, fatty degeneration in one case. The *Bones* showed periostitis, ulceration, or cicatrices in four, exostosis of the olecranon in one, sclerosis of the cranium in one, probably syphiloma of the skull in one. The *Lungs* showed gumma of the right apex in one, chronic interstitial pneumonia in four, stenosis of the right bronchus in one; there were scars or ulcers of the larynx in three. The *Skin* showed scars or ulcers in four. The *Brain* showed an apoplectic attack with hemiplegia followed by recovery in one. Scars of the *Pancreas* and *Suprarenals* were found in one, and hydrocele in one. There was extension of perihepatitis to the peritoneum in one. Affections of the throat or nares were present in several cases.

6. *Manssurrow on Syphilis of the Fibrous Tissues and the Sheaths of Tendons.*—Dr. Manssurrow of Moscow remarks (*Viertelj. für Derm. und Syph.*, 2 and 3 Heft, 1881) that from five to ten per cent. of syphilitic subjects develop lesions of the fibrous tissues or tendinous sheaths, and that persons of lymphatic temperament are most liable to suffer in this way. The affection may occur early or late in the disease, but resolution occurs without softening, except in the rarest instances; thus differing from gummata of the cellular connective tissue, which are liable to break down. The author also describes at considerable length the anatomical characters of the growths, quoting Virchow and other well-known authors, and illustrates his paper with the reports of nine cases of syphilitic swellings in connection with the tendons or fibrous structures in various situations, including the hip, knee, elbow, and finger-joints. In one instance, the growth affected the sheath of the sterno-mastoid, and was large enough to press on the trachea, and thus interfere with the breathing. The period after infection at which the growths were noticed varied from three months to thirteen years, only one, however, being later than five years. In all except one case, resolution occurred under mercury or iodide of potassium, or both. In the exceptional case—one of gummata in the neighbourhood of the great trochanter, occurring thirteen years after contagion—softening and suppuration took place in spite of treatment.

8. *Bull on Syphilitic Lesions of the Orbital Walls.*—The following is a brief *résumé* of a paper read by Dr. Bull before the New York Academy of Medicine (*New York Med. Gaz.*, November 5th, 1881). Syphilitic lesions of the walls of the orbit belong usually to the late stages of the disease; when they occur early, they are less severe. The usual seat of gummata is the frontal bone. The diagnosis is not always easy. Periostitis may be one of the earliest constitutional symptoms of syphilis. In adults, it tends to speedy resolution under proper treatment. In inherited syphilis, it is less amenable to treatment. Periostitis may be acute or chronic. The symptoms are pain, swelling, exophthalmos towards one side or downwards, redness of the eyelids, etc. The dangers are: loss of vision, optic neuritis, or simple atrophy of the optic nerve. Pain is very severe, and the attack may be ushered in by a chill. The symptoms of the chronic form are more obscure. These lesions are often accompanied by subperiosteal abscess, which usually opens through the conjunctiva or eyelid, but may open into the nose or cranial cavity. Extension to the meninges does not occur, but caries of the bone may follow, and sinuses may be left through which dead bone comes away. Of exostoses due to syphilis, the most marked symptom is exophthalmos. They are usually slow in growth, but may develop rapidly. They cause pain by pressure on nerves. Treatment should be constitutional, and careful examination made for other signs of syphilis.

9. *Robinson on the Application of Bromine to Chancroids and Chronic Ulcers.*—Dr. J. L. Robinson of Louisville states (*Ibid.*, p. 423) that he has found the daily application of a solution of bromine to chancroids and chronic ulcers associated with syphilis, of great benefit. His formula is bromine, one part; water, three parts; bromide of potassium sufficient to make a solution, which is applied by means of a mop made of cotton-wool.

11. *Thomann on Subcutaneous Injection of Iodoform in Syphilis.*—Dr. Thomann of Graz states (*Centralb. für Med. Wiss.*, No. 44, 1881) that he has treated several cases of early syphilis by injecting beneath the skin a solution of iodoform in glycerine (6 to 20). He began with a dose of 0.30 gr. (about 4½ grains) of iodoform, and gradually increased it according to circumstances up to 0.75 gr. After ten or twelve injections in various parts of the body, marked diminution of the symptoms was noticed. In some cases, slight pain was felt for a few minutes after the injection, but it usually quickly disappeared. The puncture next day was only slightly red and tender. In no case was abscess caused. Iodine could be detected in the urine within two hours after the injection, but the odour was not perceptible either in the urine, breath or sweat. The use of the drug did not cause sleepiness nor disturbance of the pulse, temperature, or of the health generally. In some cases a solution of iodoform in oil of sweet almonds was tried, but the local reaction was more severe and lasted several days. The oil solution also had to be prepared immediately before injecting it, otherwise free iodine was quickly liberated.

13. *Petersen on the Treatment of Suppurating Buboes.*—Dr. O. Petersen discusses the various methods of treating buboes (*St. Petersb. Med. Woch.*, No. 52, 1881), and describes the plan now adopted by himself. He recommends that every inflamed bubo should be painted with iodoform-collodion and covered with a warm compress; and this, he states, is often successful in dispersing the swelling. If, however, suppuration take place, an incision is made, and the abscess-cavity scraped out with the sharp spoon, after which it is washed out with a 20 per cent. solution of carbolic acid. The wound is then covered with several layers of salicylic wool,

and over this a firm pad of tow covered with varnished paper. A bandage is then firmly and evenly applied, paste being also sometimes used to give greater firmness, so that the abscess-walls are kept in close and accurate apposition. In twenty cases treated by the author in this way, cure was usually obtained after one to three dressings, each being left undisturbed ten to fifteen days on an average. In one case, when the pressure had not been quite equable, a second small abscess had to be opened.

14. *Hill on Linear Rectotomy for Syphilitic Stricture of the Rectum.*—A married woman, aged 26, was admitted into University College Hospital, May 10, 1881 (*Brit. Med. Jour.* Dec. 24, 1881). The history pointed clearly to syphilitic contagion three years before. On examination, the margin of the anus was found to be indurated for about two inches, and close to the outlet there were some ulcerating nodules. The gut for about two inches above the anus was uneven, ulcerated and contracted. The stricture terminated at the upper end by a sharp edge resembling a band. On May 18, Mr. Berkeley Hill operated as follows. The patient having been brought under the influence of ether, Mr. Hill introduced one finger into the rectum; he then passed a large curved needle, threaded with silk, through the skin in the middle line just in front of the coccyx, and pushed it on between the sacrum and the rectum, until the point was above the indurated part. The point was then carried into the rectum, and the silk seized with forceps and drawn out through the stricture. The needle was then withdrawn, leaving the silk ligature in its track. A wire was then attached to the silk, and, after being pulled through, was attached to an *écraseur*. The included tissues were then divided with very slight bleeding. By June 3rd, the patient could pass for herself a No. 10 rectal bougie without pain. Her general condition was good, the ulcers had greatly improved; defæcation was easy, and there was complete control over the sphincter. On June 4th, the patient was discharged.

15. *Neumann on a Case of Soft Chancre in the Rectum.*—A woman, aged 26, presented herself at Professor Neumann's Clinic, complaining of severe pain on defæcation, from which she had suffered for some days (*Allgem. Wien. Med. Zeitung*, No. 49, 1881). On examination, a sharply cut sore, having the characters of a soft chancre, was found on the posterior wall of the rectum, about four centimètres above the sphincter. The anus and the genital organs were healthy. Inoculation of the discharge of the rectal ulcer on the patient's arm produced two characteristic soft sores. The patient's husband was then examined, and was found to have a soft sore on the margin of the prepuce. He admitted that he might have infected his wife. Two chancres subsequently appeared among the anal folds in the case of the woman, presumably from secondary inoculation by the discharge from the rectal sore.

16. *Broadbent on Syphilitic Pachymeningitis of the Cerebellar Fossa.*—At a meeting of the Medical Society on January 30 (*Lancet*, Feb. 4, 1882) Dr. Broadbent described the *post mortem* appearances in a remarkable case of paralysis of the seventh, eighth, and ninth nerves; the patient having been brought before the Society on October 15 (see LONDON MEDICAL RECORD, Jan., p. 24). It was supposed that the lesion was a gumma, situated in the lateral portion of the medulla and pons Varolii. It turned out to be a case of syphilitic pachymeningitis of the right cerebellar fossa. When the tentorium was divided, the right lobe of the cerebellum was found to be closely adherent to the dura mater, which was thickened, and thus caused compression of the nerves at their point of exit from the foramina. The medulla, the pons Varolii, and the brain itself were quite healthy. ARTHUR COOPER.

TOXICOLOGY.

RECENT PAPERS.

1. HESSLER, HUGO.—Phosphorus Poisoning. (*Vierteljahr. für Gerichtl. Med.*, Band xxxv, p. 248; and Band xxxvi, p. 10.)

2. Poisoning by Laburnum. (*Brit. Med. Jour.*, Feb. 11, 1882.)

3. SCHELLE.—Poisoning by Tartar Emetic. (*Friedreich's Blätter fur Gerichtl. Med.*, 1882, p. 8.)

4. HOHN and REUBOLD.—Arsenic. (*Ibid.*, pp. 15, 22.)

5. ALLEN.—On Strychnine. (*Commercial Organic Analyst*, vol. ii, p. 486.)

6. CORNIL and BRAULT.—Phosphorus and Arsenic. (*Gaz. Hebd. de Méd.*, Jan. 13, 1882.)

7. JORISSEN. — Test for Morphia. (*Zeitschr. für Analyt. Chem.*, Band xx, p. 422.)

8. DEY.—Poisoning by Red Lead. (*Rep. Calcutta Med. Soc.*, July 13, 1881.)

9. CHURTON.—Silk-Thread as a Source of Lead-Poisoning. (*Brit. Med. Jour.*, Dec. 1881, p. 1013.)

10. POPOFF.—Arsenical Poisoning. (*St. Petersburg. Med. Woch.*, No. 33, 1881.)

11. DANILLO.—Phosphorus Poisoning. (*Arch. Gener. de Méd.*, Jan. 1882.)

1. *Hessler on Poisoning by Phosphorus.*— Hugo Hessler contributes a paper on acute phosphorus poisoning (*Vierteljahr. für Gerichtl. Med.*, Band xxxv, p. 248, and Band xxxvi, p. 10). He summarises his conclusions as follows. 1. The commencement of toxic symptoms is not so dependent upon the form in which the poison is administered and its quantity, as upon the susceptibility of the individual, and the contents of the stomach at the moment of ingestion. 2. Icterus of the skin is a constant symptom, and usually appears on the third day. It is rather of hæmatogenic than of hepatogenic origin. 3. Virchow's gastro-adenitis is a never-failing pathological lesion. 4. There is no distinctive difference observable between acute phosphorus-poisoning and acute atrophy of the liver, either in the commencement or in the course of the illness; nor in the lesions of the liver; nor even by chemical tests applied to the urine. 5. Statistics show that the prevalence of changes in the muscles of the lower extremities (fatty degeneration) is characteristic of acute phosphorus-poisoning. 6. In acute phosphorus-poisoning the blood is rather thin and dark red, than viscid, and the ecchymoses are unequally distributed in each organ, and most extensively in the pectoral viscera. Both these appearances are direct results of the phosphorus-intoxication acting through the heart, liver, and kidneys. 7. Chemical investigations have shown that, in animals destroyed by phosphorus, the process of oxidation of the phosphorus is not so much dependent upon the time which has elapsed, as upon the amount of air and oxygen in the part in which the phosphorus is oxidised into phosphoric acid. 8. The detection of phosphorus chemically is not absolutely necessary for the diagnosis of phos-

phorus-poisoning. This must be accepted as either probable or certain, when the above-mentioned proofs lend support to the assumption that the case is one of poisoning, and when there are no other diagnostic factors to elucidate the case. 9. Casper's four criteria of poisoning are equally important for diagnosis, and must be borne in mind. They support one another, and are the more diagnostic in proportion as they are exact and extensively distributed.

2. *Poisoning by Laburnum.*--Two fatal cases are recorded (*Brit. Med. Jour.*, Feb. 11, 1882) of poisoning by some undetermined portions of the laburnum tree. Two children, aged 3 and 8 years respectively, are supposed to have eaten of the tree (probably the pods) at the same time. The elder girl, 8 years of age, was seized with vomiting and diarrhœa. She complained of headache, and was prostrate. Six hours later, vomiting and diarrhœa had ceased. She then made a noise in her breathing, and continued in much the same state till her death, about fourteen hours from the commencement of the illness. Next day, the younger girl, 3½ years of age, became tired, sleepy, and vomited frequently. She passed two motions. Five hours later she was convulsed, and the convulsions continued till her death, eight hours from the commencement of the illness. The symptoms manifested by the two children thus showed marked differences. The only noticeable appearances, *post mortem*, were in each case marks of irritation of the gastro-intestinal mucous membrane. No fragments of the plant were detected in the alimentary canal of either child; but the alkaloid cytisine was extracted from both children, and not only reacted as such to tests, but was given with fatal effect to a mouse.

3. *Schelle on Tartar-Emetic.*—Dr. Schelle (*Friedreich's Blätt. für Gerichtl. Med.*, 1882, p. 8) communicates a case of poisoning by tartar-emetic. One gramme (15½ grains) of the salt administered as an emetic caused the death of a young man in six hours. On exhumation of the corpse, the characteristic pustular eruption produced by tartar-emetic was found on the gastric mucous membrane.

4. *Hohn and Reubold on Arsenic.*—Drs. Hohn and Renbold (*Friedreich's Blätt. für Gerichtl.*, pp. 15, 22) also publish interesting cases of acute arsenical poisoning. In Hohn's case, the body was exhumed after being buried for more than fourteen years, and arsenic was detected in it.

5. *Allen on Strychnia.*—Allen (*Commercial Organic Analysis*, vol. ii, p. 486) utilises the optical properties of a compound which strychnia forms with iodine for the detection of the alkaloid. A very small drop of an alcoholic solution of iodine is placed on a microscope slide, and allowed to evaporate. Directly it is dry, a drop of the solution of the supposed alkaloid in acetic acid with a drop of sulphuric acid is added; a drop of rectified spirit is then placed on the mixture, which is allowed to evaporate spontaneously. On examining the residue under the microscope with a Nichol's prism and selenite, but using no analyser, characteristic crystals will be observed if strychnia be present. These may have the form of circular tufts of fine black needles; of minute dots, of a more or less triangular form, exhibiting yellow, pink, and green tints; large triangular crystals of a yellow or green colour, composed of three parts radiating from a centre; solid nacled prisms, occasionally showing complementary tints; or solid rosettes of four, five, and six-sided prisms. In all cases it is, of course, desirable to compare the results with those obtained in a similar manner from a minute quantity of strychnia. The essential conditions are the simultaneous presence of alcohol, sulphuric and acetic acids, free iodine, and a trace of strychnia.

6. *Cornil and Brault on Phosphorus and Arsenic.*—Cornil and Brault (*Gaz. Hebd. de Méd.*, 13 Jan. 1882, p. 27) have experimented upon the lesions induced by the administration of phosphorus. They find that a non-inflammatory fatty degeneration at once sets in, attacking the liver, kidneys, and lungs. This fatty degeneration is speedily followed by complete destruction of the cellular protoplasm and nuclei. When arsenic is administered, similar pathological changes are produced; but these are less regular than is the case with phosphorus, and the lungs are the organs most frequently attacked.

7. *Jorissen on a Test for Morphia.*—Jorissen (*Zeitschr. für Analyt. Chem.*, Band xx, p. 422) proposes a new and delicate test for morphia. A solution of the alkaloid, free from foreign materials, is evaporated to dryness, and the residue is heated in the water-bath with sulphuric acid. A minute crystal of ferrous sulphate is added, and stirred with a glass rod. The mixture is heated for a minute longer, and poured into a white capsule, containing about half a fluid drachm of strong solution of ammonia. The morphia solution sinks to the bottom, and a red colour—violet at the margin—forms where the two liquids touch, whilst the ammoniacal liquid becomes blue. Codeine does not give this reaction, which succeeds with one-tenth of a grain of morphia.

8. *Dey on Poisoning by Red Lead.*—Assistant-Surgeon Kanny Loll Dey (*Rep. of Calcutta Med. Soc.*, July 13, 1881) reports a case of suicidal poisoning by red lead. A woman was seen alive at 8 a.m. At noon, she was found groaning and in convulsions. She struggled for about an hour in this condition, and then expired. The only very noticeable appearances met with at the necropsy was corrosion (*sic*) of the stomach, and the mucous coat easily separable. This is perhaps the only recorded fatal case of poisoning by red lead. THOMAS STEVENSON, M.D.

9. *Churton on Silk Thread as a Source of Lead Poisoning.*—Dr. T. Churton records, in the *Brit. Med. Jour.*, Dec. 1881, p. 1013, a case of lead-poisoning in a dress-maker, where he was puzzled to trace the origin of the poison. Accidentally hearing that silk thread was sold by weight, and that it was the custom to moisten it with a lead salt, he gained a clue to the mystery. [A glance at section 288 of the *Medical Digest* at once shows that this source of poisoning has been known since 1866.—*Rep.*]

R. NEALE, M.D.

10. *Popoff on Arsenical Poisoning.*—Dr. N. Popoff, after a series of experiments in Mierzejewski's laboratory (*St. Petersburg Med. Woch.*, No. 33, 1881), comes to the following conclusions respecting arsenical poisoning: 1. That arsenic may, within a few hours after its application, cause an unmistakable alteration of the spinal cord, which may manifest itself either as myelitis centralis acuta or poliomyelitis acuta; 2. That in more chronic cases an inflammation may result, not only of the grey substance but of the white also, constituting a diffuse myelitis; 3. The peripheral nervous system is unaffected in those cases in which death occurs within three months after the reception of the poison; 4. That the paralyses from arsenic poisoning are of central origin. He has had similar results with lead, and believes that in long continued metallic poisoning,

alterations in the spinal cord are very likely to occur.

11. *Danillo on Phosphorus Poisoning.*—Dr. M. S. Danillo (*Archives Gén. de Méd.*, Jan. 1882) comes to the following conclusions respecting the pathological anatomy of the spinal cord in poisoning by phosphorus. 1. Changes in the spinal cord from phosphorus intoxication are of myelitic nature. 2. In acute phosphorus-poisoning, the central nervous system contains only depôts of pigment of hæmatic origin. 3. Large doses of phosphorus give rise to a central myelitis involving the entire length of the spinal cord, with extravasation and pigmentation; small and frequently repeated doses occasion a diffuse myelitis. 4. Certain nervous phenomena, observed during life as consequences of phosphorus intoxication, result from either one of these types of myelitis. In cases of poisoning by phosphorus, attention has been chiefly devoted to the liver, but these observations would seem to show that the central nervous system also requires extended chemical examination.

REVIEWS.

Surgical Lectures delivered in the Theatre of the Westminster Hospital. By Richard Davy, M.B., F.R.C.S., Surgeon to the Hospital. London: Smith, Elder, and Co. 1880.

'Said Plato, "He shall be as a god to me, who can rightly divide and define." Men who have this faculty—the "Blick" of the Germans—we cannot produce directly by any system of education; they come, we know not when or why, forming a small band, a mere understanding of whose thoughts and works is a test of our highest powers.' So spoke Dr. Billings, in his address before the International Congress. Now, though it is far from being a test of the highest powers, even of a reviewer, to understand the action and value of Davy's lever, yet the book before us shows that its author has, in an extraordinary degree, the gift of invention, an essential part of which is 'this faculty (of seeing, dividing, and defining),—the Blick of the Germans'. For, whether it be a new instrument, a picture, or a poem, inventor, artist, and poet must alike 'divide and define' what lies before him ere he can 'body forth the forms of things unknown'.

It would be idle to enumerate the leading inventions noticed in this book, because, over and above them, it is studded with cunning suggestions and happy thoughts. These will strike the reader at the first glance, partly from their nature, and partly because the style is plain, honest, and straightforward everywhere. We will say no more, therefore, in praise of the book, than that every surgeon who takes the slightest interest in surgery will find these lectures interesting.

But he who reads attentively, reads critically. We must, therefore, take exception here and there. Firstly, the author seems inclined to value too highly some of his own ideas, and to respect too little the inventions of others. The lecture (11) on 'Hammock Suspension', etc., in the treatment of spinal curvature, is too superficial, and the sentence, 'I venture to express my opinion that, in future, more spinal curvatures will be fortified in the manner I am now about to describe than after the suspension-method of Sayre,' is illustrative of the remark just made. Judging by an extensive experience of Sayre's treatment, we confess the belief that the horizontal position is neither necessary nor desirable in the application of ninety-nine jackets out of a hundred, and that, in the odd case, the patient can be bandaged easily when stretched across the interval between two stools or two tables, without being swung in a hammock or anything else. Moreover, if a second jersey be placed next the skin, as in Mr. Oxley's practice, or a handkerchief, the hammock involves three layers of soft structure between the plaister and the body.

In the matter of statistics, Mr. Davy falls into the usual error of generalising from far too few cases. Lecturing on 'the dressing of wounds', he states that during the preceding two years (1875-6) he had performed 33 excisions and amputations, of which 5 were large amputations, 5 Syme's amputations, 8 excisions of the largest joints (hip, knee, and shoulder), and 15 ranged in point of seriousness from excision of the breast to amputation of fingers. For what the operations were done is not stated; but no death resulted. We presume some conclusion is expected to be drawn from these statistics, because the preceding paragraph runs as follows: 'For the last three years, as many of you know, most of the wounds received into my wards have been exposed to the air without any dressing whatever; and we may now fairly judge of the results obtained by this method.' Moreover, in the same lecture, a number of dogmata are laid down in the most positive manner, while of Lister's antiseptic system it is declared that, in ordinary surgical work, 'the game is really not worth the candle'. With reference to a table of seventeen cases, in which Davy's lever was used, the author states that 'it seems to prove conclusively that the mortality decreases *pari passu* with the amount of blood lost'. Now, a calculation will show that the fatal cases lost an average of 2.7 ounces each, while the recoveries lost 1.7 ounces each. But the ages of the former patients averaged 23.3 years each, and the ages of the latter only 13.7 years each; which average would, by the removal of a single patient, aged 43, be brought down to 10.3 years. Such statistics, taken alone, demonstrate nothing except the simple numerical facts which they represent. Surgical statistics are only worthy of being generalised on at all when they refer to large numbers extending over a number of years, and can scarcely be said to 'conclusively prove any grand law' unless they have been collected at different places. For, the surgeon, employing his means to defend wounds from 'accidental' diseases, as they are called, is like a commander using military forces to defend a country. Some countries, like our own happy land, are, by their natural position, safe from invasion; so are some hospitals. Even less fortunate countries have times of peace and of war, distinct and alternating, the latter also varying in degree of danger, while hospitals have periods of health alternating with those of plague. But the wise commander strives always to keep his forces trained and armed according to the best teachings of modern military science; he would not plead, as an excuse for arming our volunteers with Brown Bess, that no foreign foe had trod English soil while that was our best weapon. Then, surely, the wise surgeon should not think to defend adherence to one system, and, despite of another, while giving, as a prime reason, the experience of one hospital in two years, including *e.g.*, less than a score of major amputations. Pestilence and war alike are apt to come without warning. So, we gather casually from different parts of his own book, that, the very next year, Mr. Davy lost

a partial excision of the tarsus for deformity by acute septicæmia, and an amputation through the knee-joint, twenty days after operation, from 'constitutional and accidental causes'.

'Subject IX' heads a lecture on the treatment of stricture, especially by splitting with a new instrument of the author's. Here we have more statistics, and another crowd of the metaphors which tend to make the book amusing and more readable. There were 3 deaths in 115 cases; and the surgeon who, being used to splitting, refuses to urethrotomise, is compared to David refusing to put on Saul's armour. Teevan's statistics of urethrotomy, if we remember rightly, gave 10 deaths in 1,192. Some people would consider that these statistics, compared with the others, 'prove conclusively' that Saul hath slain his thousands, but David his tens of thousands. Statistics are treacherous things, and are easily persuaded to sting the breasts of those who too readily nourish them.

In conclusion, we hope that Mr. Davy will take our criticisms in good part; and we further hope that everyone will buy his book, or, at all events, read what, in spite of a few faults, is an excellent, a pleasant, and a remarkable work.

C. B. Keetley.

A Plea for Early Ovariotomy. By G. G. Bantock, M.D., F.R.C.S.Ed., Surgeon to the Samaritan Free Hospital for Women and Children. London: H. K. Lewis. 1882.

In this work, the author objects to the practice of delaying operation after the diagnosis of an ovarian cyst in an early stage, till the patient's health is impaired, for the following very sound reasons. The principle of such a delay is a departure from that generally followed in the case of other diseases treated surgically. The presence of the tumour is the cause of structural disease in other organs. Ovarian tumours are liable to a variety of accidents, such as rupture, either spontaneously or from injury, and twisting of the pedicle; they may likewise inflame, and extensive hæmorrhage may take place into their cavities through degeneration of their blood-vessels. The existence of adhesions, or of degenerative changes in ovarian tumours, greatly interferes with the success of the operation, whilst, on the other hand, the earlier and simpler the operation, the greater is the chance of recovery. Dr. Bantock also objects to tapping, a palliative which is not only of very transient benefit, but is also not without risk, and never fails to increase the dangers of a subsequent operation. In this point, he is amply supported by others who entirely disagree with his general views concerning ovariotomy. From a general surgical point of view, Dr. Bantock's arguments can scarcely be refuted, especially when we remember that a small multilocular cyst in a healthy woman, if left alone, will become a large multilocular cyst in an unhealthy one; whilst, if it be removed, the operation will be perfectly simple, and the risk less than it can possibly be, under any circumstances, in a later stage.

Contribution à l'Etude de L'Ostéite Destructive. Par D. Morisani, Laboratoire d'Histologie du Collège de France. Travaux de l'Année. Paris: Masson. 1881.

The theory which forms the basis of Kölliker's opinion concerning the function of osseous cells in this morbid process, is the one most generally accepted. It asserts that the destruction of compact osseous tissue is due to the imperfectly understood action of the osteoblasts which form Howship's lacunæ. Although researches have proved that the destruction of osseous cells is not absolutely constant, it is generally admitted that the part they play in inflammation of bone is passive. M. Morisani studied specimens of osteitis representing different periods of their morbid condition. We give the method he adopted. He separated from the bone, by means of a very fine saw, small fragments. These he macerated for two hours in filtered lemon-juice, afterwards washed them in distilled water, and then soaked them in an aqueous solution of chloride of gold; the gold was then immediately reduced by water and a few drops of acetic acid, acting in the presence of light.

In nearly all forms of osteitis, there exists, along with the destructive process, bony formation. In osteitis, with intense infiltration of the medullary tissue, new bony formation takes place in the cavity of the dilated canals. The predominance of the destructive or the productive process determines the form of osteitis under observation.

M. Morisani classes destructive osteitis under the heads of acute and subacute, or chronic. His microscopic examinations furnish the reasons for this classification. In acute osteitis, the tissue is rapidly destroyed. The medullary tissue is composed principally of young elements. In the second, there are indications of inflammation, but less marked. It is not uncommon to meet with both forms in one specimen; but lines of demarcation, limiting the predominance of one or the other, can always be traced. The chronic form is the most favourable for the study of lesions of bone. In the marrow, there is always a slight infiltration of young elements. The medullary cells are greatly increased in size and very granular, and the network of the connective tissue is remarkably visible. The borders of the bony tissue, subjacent to the medullary tissue, are not sharply cut, as is the case in some destructive forms, but are composed of fibrils. These mingle with the tissue which fills the medullary canal. This decomposition of the osseous tissue into fibrils does not always take place in the whole of the medullary canal in a marked degree, but only in limited regions. In others, there are not any signs of this decomposition. The aspect of the fibrils is variable; sometimes their direction is identical with the osseous lamellæ, sometimes they are perpendicular to them, and interlace them in every direction. M. Morisani was unable to colour the fibrils. All colouring agents failed, even magenta red, which deeply coloured the osseous substance. The relation of the fibrils with the medullary tissue is less variable; their continuation with the connective tissue of the medullary canal is very evident. This feature, joined to others which characterise the fibrils of the connective tissue of the medullary canal, lead M. Morisani to conclude that their origin is in the osseous tissue, and thus interpreted that they are the glutinous fibres that Ebner has described as forming the organic reticulum of bone, an opinion which has been confirmed by many. In osteitis, where infiltration of the medullary tissue is very intense, it is impossible to see anything on the border of the bone: young cells rest on it.

M. Morisani proposed to study whether the *rôle* of osseous cells in bony inflammation is active or passive. His observations were attended by negative results. He never saw the slightest indication of multiplication of cells. His conclu-

sions are as follows. In chronic osteitis, the distinction of the compact portion of the bone is owing to a gradual absorption; the fundamental tissue is decomposed into fibrillæ, which are connected with the fibrillæ of the connective tissue of the medullary canals and Haversian canals, and probably contribute to form the network of connective tissue of these spaces.

In rapid forms of osteitis, accompanied by disordered nutrition of a severe character, there is granular disintegration of the stroma of the bone, with absorption of calcareous salts.

In chronic forms, the osseous cells do not die as the compact tissue is absorbed, but fall into the medullary spaces, and there probably change into the connective tissue cells of those spaces. M. Morisani thinks it probable, in acute forms, that they are destroyed by the results of intense inflammation. Both in the chronic and in the acute form, the destruction and disappearance of compact bony tissue is in direct proportion to the increase in the number and volume of the vessels, and is probably the result of the changes determined by the inflammatory exudation. W. VIGNAL.

De la Syphilis du Testicule. Par le Dr. RECLUS. Paris, 1882.

IN a carefully written monograph of between 200 and 300 pages, Dr. Reclus has set forth his views on the subject of syphilis of the testicle. The clinical and general portions are the result of his own experience and study: the microscopic anatomy has been entirely supplied by Dr. Malassez, whose name is a sufficient guarantee for the thoroughness of the histological investigations. The views of the author are neither original nor very striking; they may be found in many text-books on syphilis. They may be summed up in a few sentences. Two forms of syphilis of the testicle are common, sclerosis and gumma; but these two forms do not differ as they have been often thought to do: they are almost always associated, and the gumma always occurs in the sclerosed portions of the organ. Gumma occurs both in the tunica albuginea and in the interior of the testis. The symptoms and course of the disease depend partly on whether sclerosis or gumma predominates, partly on the part of the testis which is affected. The sclerosed testis does not suppurate, but tends to atrophy; the gumma may break down, and fistula or hernia testis may be formed. The treatment of syphilitic testis, of whatever kind, is by large doses of iodide of potassium. Mercury is not necessary; local treatment is superfluous.

M. Malassez teaches that the primary changes of sclerosis take place in the connective tissue, and not within the tubules. The connective tissue between the tubes, of the walls of the blood-vessels, and of the walls of the seminal tubes, is thickened by interstitial deposit, and the tubes become consequently atrophied. In the midst of this sclerosed tissue gummata are formed, many of them very tiny—scarcely distinguishable with the naked eye—others of much larger size. The grouping of the cells, which are either small, round, and granular, or of large size (migrated cells), and epithelioid in appearance, distinguishes the smallest gummata from tubercles; for they are found in the interstitial tissue, apart from the seminal tubes and large vessels; whereas, in tubercular testis, they are found about the canaliculi. In a caseous gumma, four zones may be discovered—an external fibrous zone, the sclerosed tissue in which the gumma lies; a red border formed of parallel fibrous bands, in which are proliferated connective-tissue cells, and veritable islands of embryonic and migrated cells, and capillaries filled with white corpuscles; a clear border, of similar fibrous bands, separated by trabeculæ of badly coloured granular cells; a central mass, mortified, possessing a lobular arrangement, the lobes of which are composed of caseous material, surrounded by clear trabeculæ of fibrous tissue. The central mass becomes caseous on account of the vast quantity of cells which are collected in one spot, which require nourishment in excess, and receive it in diminished quantity on account of the sclerosis of the walls of the vessels and consequent contraction of their calibre. The clear border is an investing membrane, similar to that which forms around foreign bodies. The red border is a portion of the investing membrane in process of formative activity.

Even if this monograph contains nothing essentially new, it is at least as complete a work as any which exists on syphilis of the testicle. The drawings are exceedingly good, both of the naked eye and histological characters of the disease, and no one can read the clinical chapters without considerable benefit. HENRY T. BUTLIN.

A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs. By S. W. GROSS, A.M., M.D. Pages 174. London: H. Kimpton. 1881.

IN this book, the disorders of the male sexual organs are considered in four chapters, headed respectively —1. Impotence; 2. Sterility; 3. Spermatorrhœa; 4. Prostatorrhœa.

With regard to the first and third of these disorders, the author objects to the term 'functional', usually applied to them, and states that, according to his own observations, they usually depend upon reflex disturbance, almost invariably induced or maintained by appreciable lesions of the prostatic urethra. Masturbation is, of course, by far the most frequent cause; and special stress is laid on the comparatively large number of cases of stricture (13 per cent., according to Dr. Gross's experience), which owe their origin to urethritis set up by the practice of onanism.

Sterility in its various forms is fully described under the three heads of Aspermatism, Azoospermism, and Misemission; the latter including vices of conformation of the urethra and malposition of the meatus. In connection with this portion of the subject, the author insists on the necessity for examining the husband in cases of unfruitful marriage, considering him, as a rule, to be at fault in one case out of six.

Dr. Gross has succeeded in giving a clear and practical description of a very troublesome class of diseases, and his book is well worth reading.

ARTHUR COOPER.

The Science and Art of Midwifery. By W. J. LUSK, M.D., Professor of Obstetrics in the Belle Vue Hospital, New York. London: H. K. Lewis. 1882.

THE author states that his purpose has been to present to the reader a fair account of the changes which have been made by modern investigation, in the views

entertained respecting the physiology and pathology of pregnancy, labour, and child-bed.

He further states that he has given special prominence to the labours of German investigators, because they have of late occupied a vantage ground, of which, to their credit, they have been prompt to avail themselves. In our opinion, however, the chief improvements in modern obstetrics will be seen in the copious illustrations from Ribemont, Chantreuil, Budin, and Tarnier, with which Dr. Lusk has enriched his book. Indeed, most of the so-called German improvements figured in the work, such, for instance, as the 'Prague Method of Extracting the Head', p. 365, have been, in this country at least, time-honoured manipulations, practised by all experienced midwives for years past. The expression of the fœtus by Kristeller's method is another example of long familiar manipulations in most of the lying-in hospitals in Great Britain. The remarks on phlegmasia alba dolens are meagre, and do not set forth the full extent of recent advances in the subject. The figure illustrating the extraction of the child from the uterus after Cæsarian section has not been happily chosen. It represents the child in process of being extracted feet first in a breech-presentation. Surely it would have been more natural to represent the child in the reverse position, seeing that head-presentations are in the proportion of about 200 to 1 of breech. Although the work in some parts is not nearly so full as might have been expected from a teacher of Prof. Lusk's reputation, it forms, in some respects, a fair enough reflex of recent obstetric movement. It will not, however, we fear, compete successfully with the more complete works on the subject by Leishman and Playfair in this country, and certainly not with the magnificent work which is now appearing in Paris by Tarnier, the late Chantreuil, and Budin.

The book consists of 663 pages, and contains 226 illustrations. No doubt, in future editions, it will undergo considerable additions and expansion. Some of the drawings require revision, as, for instance, fig. 156, showing the position of operator when the head is on the perinæum. In this drawing the operator's right hand is represented supporting the perinæum, whilst his left is seizing the forceps in the extraction of the head. Among the five perforators figured at pp. 378 and 379, there is not one really scientific instrument. The most serviceable and trustworthy instrument which we possess for perforating the fœtal head, that of Oldham, is omitted.

Fancourt Barnes, M.D.

The Midland Medical Miscellany. Vol. i, No. 3. Richardson and Co., Leicester.

The *Midland Medical Miscellany* is a new monthly magazine of medicine and materia medica, published by Messrs. Richardson and Co., the eminent manufacturing chemists of Leicester. Prefixed to the extensive monthly price list of this firm is a good deal of interesting preliminary matter, including notices of some of the leading topics of the day: an excellent lithographed portrait is also given this month, being a remarkably good likeness of Dr. W. B. Carpenter, F.R.S.; and a selection of articles on such current subjects as 'Poor-law Scandals', 'Medical Letters', 'Superannuation of Poor-law Officers', etc., etc.

RECENT BALNEOLOGICAL WORKS.

1. *Die Trinkskur in Wiesbaden.* Von Dr. Emil Pfeiffer. 12mo, pp. 69. Wiesbaden: 1881.
2. *On the Physiological and Therapeutic Properties of Mineral Waters, and their Administration in Chronic Diseases.* By Paul Kilian, M.D. 8vo, pp. 52. London: 1881.
3. *The Mineral Thermal Springs of Châtel-Guyon in Auvergne.* By G. H. Brandt, M.D. 12mo, pp. 30. London: 1881.
4. *Die Heissen Luft- und Dampf-Bäder in Baden Baden: Experimentelle Studien über ihre Wirkung und Anwendung.* Von Dr. A. Frey and Dr. F. Heiligenthal. 8vo, pp. 170. Leipsig: 1881.
5. *Meine Erfahrungen bei 600 Diabetikern.* Von Dr. R. Schmitz. 8vo, pp. 25. *Deutsch Med. Wochenschrift.* 1881.
6. *Brunnen und Bade Orte Praktisches Reise-Handbuch.* 6th Ausgabe. 12mo, pp. 182. Berlin: 1881.

1. The author gives the results of a long series of experiments made on his own person, carefully and laboriously conducted, which in essentials confirm the previous ones of Genth and Neubauer. The action of the Wiesbaden waters on the urinary organs is a very decided one. The augmentation of the urine is very considerable, and far greater than the increased consumption of water. It is quite marked even with small quantities of the Kochbrunnen. An increased drinking of the Kochbrunnen produces an increase in the quantity of urine, and this augmentation is greater than the mere increase of water that is drunk.

If the whole quantity of the Kochbrunnen water be drunk in the morning, when the stomach is empty, the total amount of urine secreted is greater than when the same quantity is taken in divided doses during the day. The solid constituents of the urine, and especially the urea, are distinctly increased by the use of the Kochbrunnen; and this increase is greater than the amount of the solid constituents which have been present in the water drunk. If the Kochbrunnen be taken in the morning on an empty stomach, more urea is secreted than if it be taken in divided doses during the day; whereas the total amount of solid constituents, including urea, is largest under the latter circumstances. On giving up the use of the Kochbrunnen, the secretion of solid constituents and of urea falls something below the normal standard. If the Kochbrunnen be taken in quantities sufficient to produce loose motions, the amount of the solid constituents and of the urea of the urine is considerably diminished.

Dr. Pfeiffer then proceeds to divide the methods of cure into two; first, the local method, the characteristic of which is the dose of the water remaining the same; second, the general method, characterised by the use of increasing doses. He concludes with an account of the diseases which find relief at Wiesbaden, and of those for which each mode of treatment is best adapted.

2. The contents of this *brochure* scarcely correspond with its title; but if for chronic disease we substitute the word gout, that would probably indicate its character pretty correctly. In the commencement, there are a few remarks on the use of mineral waters in spinal affections, extending over some pages. After that, everything has reference

more or less directly to gout and its treatment Alkaline waters are shortly noticed, but the author speedily throws himself into an exposition of Cantani's views on the pathology of gout. This is done at great length, and the concluding pages are devoted to hints on the diet of gouty patients. There are various useful observations to be found in the pamphlet concerning the selection of mineral waters, such as might have been expected from a man of Dr. Kilian's experience; and a good deal of information has been brought together respecting the action of alkaline waters and the theory of gout. Dr. Kilian tells us that this is the first of a series of papers on mineral waters. We hope that in the next one the subject may be treated less discursively, and that there may be more about the remedial agents of which he treats.

3. In this well-arranged little sketch, Dr. Brandt calls attention to one of the numerous Auvergne springs that has of late been coming into fashion.

He finds the waters suitable for cases, which from their complicated nature, involving liver, spleen, and kidneys in a more or less congested condition, require an after-cure after treatment at Royat. The water principally used is of the temperature of 95 deg., and well supplied with carbonic acid. In a rough way, it may be said to contain about 50 grains of solid constituents to the pint. They consist mainly of chloride of magnesium, 12 grains; chloride and carbonate of sodium, 19 grains; carbonate and sulphate of lime 19 grains; along with a little potash, silica, lithia, and iron. The water is not at first very pleasant to the drinker, as it leaves a styptic after-taste. The water is in doses of one to three glasses markedly aperient. It also acts distinctly on the kidneys and on the skin. Physiological experiments have led to the chloride of magnesium being regarded as the active principle. We think that this is carried too far; but it is interesting, as that substance occurs in many of the English and Scotch springs. The large quantity of lime present is not taken into account, being assumed to be inert in the form of carbonate and of sulphate. But, in the form of chloride of calcium, it has been supposed to be an active agent at Kreuznach and in some British springs, which latter unfortunately contain no carbonic acid to relieve their disagreeable taste.

4. The new bath-house at Baden Baden, which is probably the finest in the modern world, is not only intended for the use of those who intend to make the ordinary use of the thermal waters, but it also contains a magnificent suite of apartments devoted to every variety of treatment, and especially including luxuriously furnished hot-air and vapour baths. Although considerable light has been thrown on the operation of the latter on the system, the action of the former has remained, comparatively speaking, uninvestigated. We are therefore much indebted to Dr. Heiligenthal, the government director of the establishment, and to Dr. Frey, for the careful series of experiments which they have made with the view of determining, more accurately than hitherto has been done, the difference of action between these two classes of baths. Much light has been thrown by them on a subject in which there has been much vagueness and obscurity. We can only summarise some of their conclusions.

The *résumé* of their experiments gives very similar results for hot air and hot vapour baths; we shall note the chief differences. The sensibility of the skin to impressions of touch and of temperature was increased during, and especially after, the bath, whether hot air or vapour. The general feeling of comfort and of power was increased after either bath. On first entering the bath of either kind, there was contraction of the capillaries of the skin, caused by the stimulus of heat, followed by increased arterial pressure and moderate acceleration of pulse. Soon after this, there was immense expansion of the cutaneous capillaries, the arterial pressure diminished, the action of the heart increased much in frequency, and the contractions of the heart were lessened in force. There was increase of temperature.

During the whole bath process (with the exception of the entrance into the hot room in the case of air, and of the vapour in the case of vapour baths) the skin had an increased flow of blood; the internal organs a diminished one. The respiration was very slightly affected in frequency. In the hot-air bath, the temperature of the rectum long remained normal, and only after half-an-hour rose about two-tenths. On entrance, the temperature of the axilla fell several tenths of a degree, but soon rose and reached the temperature of the rectum or a few tenths more. On entrance into the vapour bath, the temperature in the rectum rose pretty quickly and sharply in the axilla, until the last exceeded the first by about 2.2 deg. The temperature of the rectum rose to 4.4 deg. above the normal one. In the air-bath there was profuse perspiration, less profuse in the vapour bath.

On bathing days, the quantity of urine was considerably diminished; its specific gravity was considerably increased. The secretion of urea was, on the first day, diminished, afterwards somewhat increased. The uric acid was in the hot-air bath increased two-fold; in the vapour bath, three-fold. The increase of urea and of uric acid continued for some days after the baths were given up, and the amount diminished gradually day by day. In the air-bath, there was considerable acceleration of the fluids of the body—but only moderately accelerated transformation of tissue; therefore three successive baths reduce the weight of the body but little. In the vapour bath again, the circulation of the fluids was less accelerated, while the transformation of tissue was greatly increased. Thus, three baths taken successively can reduce the weight of the body materially. From this *résumé* the authors draw a few important general conclusions. The operation of the vapour bath is on the whole more active than that of hot air. The same results are produced by it in a shorter time and with greater intensity than by hot air. The temperature of the body is raised in a few minutes in the vapour bath to a height which is not reached after hours in the air bath. Pulse and respiration are from the very beginning at least as much quickened in it, as after some hours in the air bath. Therefore *cæteris paribus*, the air can be borne longer than the vapour bath. The final loss of weight is greater in the vapour than in the hot-air bath. The excretion of important products of combustion, as a measure of transmutation of tissue, and of urea and of uric acid, as a measure of the combustion of albuminous bodies, is more important after the vapour than after the air bath. From these few facts, it results that vapour baths are on the whole indicated for strong constitutions with some power of resistance and that are not very excitable, while hot-air baths are best adapted for weaker and less excitable constitutions, which have less power of resistance. The vapour bath is, therefore, suited especially for men in the fullest powers

of manhood; the hot-air bath for old men and for very young or delicate individuals.

5. In this paper, Dr. Schmitz summarises the results derived from his large experience of diabetes. He enters fully into the etiology, symptomatology, and pathology of the disease. But as, like most other practical men, he looks mainly to diet as the remedy for diabetes, and on the present occasion alludes but slightly to the waters of Neuenahr, a lengthened notice would be out of place here.

6. This is a compact and excellent hand-book of all the mineral waters of Germany, meant for general use, but which many a medical man will be glad to refer to. It treats exclusively of German, Austrian, Belgian, and Dutch spas and sea-side places; it has been remodelled, and fulfils its promise as a practical guide for the stranger. Of course there are inaccuracies, and the lists of medical men practising at various stations require revision.

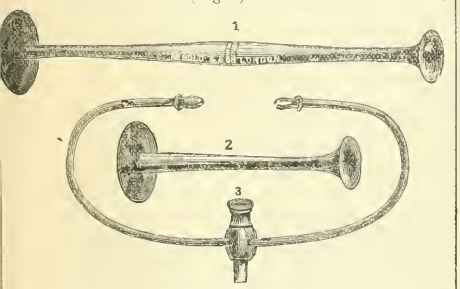
J. Macpherson, M.D.

NEW INVENTIONS.

A NEW CONVERTIBLE STETHOSCOPE.

The 'Convertible Stethoscope' is a very simple arrangement for promoting the practical study of auscultation with both the single and the double instrument, introduced by Dr. John Ward Cousins, Surgeon to the Royal Portsmouth Hospital. It consists of a flat ear-piece; a shaft, nine inches in length, separable into two parts; and a flexible tube, with perforated wooden ear-plugs. These separate parts are all adapted to each other by the same simple joint; so that, by fitting them together in different combinations, four stethoscopes are produced.

1. A long single stethoscope, adapted for subclavicular auscultation (Fig. 1). This form of instrument



is often very useful in practice; for, by its length, the head is kept away from the face of the patient, and it also prevents uncomfortable stooping over the bed.

2. An ordinary short stethoscope (Fig. 2), which is especially serviceable for the dorsal examination of patients confined to bed.

3. A double stethoscope (Fig. 3). The shaft of the short single tube completes the instrument. The ear-plugs are retained in position, without pressure, by adapting them to the size of the external auditory canal, and not by fixing them in the ears, as in the ordinary binaural stethoscope, by means of an elastic band attached to the ear-tubes. This method removes at once some of the most common objections raised against the instrument. It prevents the uneasy sensation of pressure in the meatus, and also the friction-sounds which are often perplexing to the student. The ear-plugs, moreover, are made in several sizes, to suit the varying capacity of the canal; and this is a little practical matter very necessary to remember in selecting an instrument. This will be found a very handy form of stethoscope. The chest-sounds can be examined with both ears, and then again with either ear alternately, by simply compressing the elastic tubes between the finger and thumb; in this way, the single and double auditory impressions may be conveniently compared and studied.

The instrument is made by Messrs. Arnold and Sons, of West Smithfield, and is supplied in a small case, so that it can be carried in the pocket very conveniently, and with more safety than the ordinary stethoscope. The price of the convertible stethoscope, with binaural tube, in leather case, is 10s. 6d.; ditto, with differential tubes, 15s.; ditto, ditto, with chest measure, marking pencil, and thermometer, 25s.

INSTRUMENT FOR GASTROSCOPY AND ŒSOPHAGOSCOPY.

Dr. Mikulicz, one of Professor Billroth's assistants, has, in conjunction with Herr Leiter, the Vienna instrument-maker, contrived an instrument for the above purposes. It consists of a thick inflexible tube, twenty-six inches long, and rather less than half-an-inch thick. This tube contains insulated wires for the electric current used for illumination, two water-canals, a fine air-tube for the inflation of the stomach, and the wide lumen for the optical apparatus. At the lower end is the platinum loop for illumination, covered by a crystal window; near this the prism for refraction of the rays, and the opening of the air-tube. Between the middle and lower thirds, the tube is slightly bent, about 150 deg., and here again there is a prism. The stomach is first washed out, then inflated by means of the instrument; the patient is slightly under the influence of morphia, but not under chloroform, and lies on the side, so as to allow the saliva to flow unhindered from the mouth. The instrument is passed by the side of the mouth and larynx, not in the middle. For the stomach, two instruments are necessary, viz., one for the cardiac, the other for the pyloric end.

BENGER'S PEPTONISED FOODS.

We have received from Messrs. Mottershead and Co. of Manchester samples of Benger's peptonised or partially digested foods. These are, undoubtedly, a great advance on any previous attempt in this direction. The self-digestive farinaceous food consists of wheaten flour subjected to a preliminary process of cooking, and then impregnated with pancreatic extract. When the food is mixed with warm milk or warm milk and water, the digestive principles of the pancreatic extract fulfil their function, and convert the starchy matter of the food and the albuminoid matters, both of the flour and milk, into soluble products, which are readily absorbed. The food is made without the slightest difficulty. A tablespoonful should be mixed in a basin with four tablespoonfuls of cold milk, and to this should be added gradually, and with stirring, half a pint of boiling milk or milk and water The process of

digestion commences at once, and will have considerably advanced by the time the food is sufficiently cool to be eaten. In cases where the digestive powers are much impaired, it may be desirable to allow the food to stand for half an hour or more, in order that the change may be complete. The process may be arrested at any moment by boiling. The food so prepared has no disagreeable taste, is palatable and excellent in every way. It is taken readily both by adults and children. We have given it in very many cases of acute dyspepsia, gastric ulcer, and the vomiting of the later stages of phthisis, with the most marked benefit, patients frequently retaining it after every other food had been rejected. For children who throw up their milk in curdled masses it is invaluable.

Of Benger's Peptonised Beef-Jelly we can speak in equally positive terms. It may be regarded as a concentrated beef-tea, containing a large proportion of beef-fibre in the peptonised form. It is best taken alone, a teaspoonful or more at a time, but is frequently used to 'fortify' beef-tea or soups. We have found it invaluable for old people whose digestive powers are feeble, and also in convalescence from acute diseases. The introduction of these preparations is a distinct advance in therapeutics.

MISCELLANY.

THE Göttingen Royal Society of Sciences offers, in the physical class, a prize of 50 ducats (£23) for the best investigation, with accurate experiments, of the chlorides and amides of cyanogen (the present data regarding these compounds being rather uncertain). Papers must be sent in before the end of September 1884.

A COMMISSION has been appointed in Paris composed of MM Wurtz, Berthelot, and other influential men of science connected with politics, to establish a superior School of Chemistry of Physics. The course of instruction will occupy three years. It is stated that M. Cochery will devote to this institution the surplus of the International Exhibition of Electricity.

AT a recent meeting of the Trustees of the Lewes Studentship in Physiology, which was founded by the late 'George Eliot', in memory of her husband, Mr. George Henry Lewes, the vacancy occasioned by the appointment of Dr. Roy to the Brown Professorship of Pathology in the University of London was filled up, according to the terms of the Trust, by the election of Mr. L. C. Wooldridge, D.Sc. Lond. Dr. Wooldridge is a former student of Guy's Hospital, who has lately been working in Professor Ludwig's laboratory at Leipzig. He has already made investigations of importance, one of which, on the part taken by the white corpuscles in the coagulation of the blood, has been read before the Royal Society. The studentship is for three years, and its conditions provide for the holder devoting himself during that time to physiological researches.

A NEW OPHTHALMOLOGICAL MAGAZINE. — A new French monthly magazine, the *Revue Générale Ophthalmologique*, is announced from the well known house of G. Masson, Paris. The review is under the direction of Professor Dor of Lyons and Dr. Meyer of Paris, assisted by Dr. Carreras Arago of Barcelona, Dr. Magnus of Breslau, Dr. Manfredi of Modena, Dr. Shenkl of Prague, and Mr. Swanzy of Dublin. A prominent feature will be a copious bibliography of ophthalmological literature, and a critical analysis of all publications relating to ophthalmology; Dr. Meyer is entrusted with the review and analysis of all French works, and Professor Dor with the same functions in regard to the ophthalmological literature of other countries.

ADMISSION OF FEMALE PHYSICIANS TO MEDICAL SOCIETIES.—The Philadelphia correspondent of the *Boston Medical Journal* writes: The momentous question which for some time had been agitating the County Medical Society, was finally set at rest by a formal vote. On the notices for the stated quarterly meeting held October 19, 1881, it was stated that the question of the eligibility of women practitioners of medicine for membership in the Society would come up for discussion, having, by a resolution passed at a previous meeting, been made the special order of business for this meeting. In consequence of the general notice, a large attendance was secured. When the matter came fully before the meeting, it was found that no organised opposition existed, and the matter was decided, almost without a dissenting voice, by the adoption of a resolution declaring that it was the sense of the Society that women practitioners are eligible to membership 'under the same laws and regulations governing the admission of men'. This important step was taken simply as an act of justice, and not without full consideration of the question. The traditions of the Society and the feelings of many of the members were, apparently, so opposed to it, that hitherto the Board of Censors felt unable to endorse female candidates, but *nous avons changé tout cela*, and the names of several women practitioners have already been presented and recommended for membership in the Society. Another reporter observes that, at the last annual meeting of the Gynæcological Society (one of the most valuable and important societies of the United States, and second to none of the same speciality), several ladies, were present, of whom one, Dr. Mary Putnam Jacobi, took an interesting and useful part in the proceedings. Dr Mary Putnam Jacobi occupies already a position in practice in the best medical societies in New York.

AMERICAN MEDICAL WIT.—The *New York Med. Record* of December 3, 1881, publishes the following amusing characterisation of various sections of the American medical profession, under the title of 'A Medical Song from "Patience".'

A New York medical man,
A very much advertised man,
A pills-in-variety, talk-in-Society,
Each-for-himself young man

A Philadelphia man,
An *Index Medicus* man,
A think-it-all-gammon, this talk of Buchanan,
Great-medical-centre young man.

A Boston medical man,
A hyper-historical man,
An ultra-persimmon toward medical women,
A Harvard-or-nothing young man.

A Chicago medical man,
A wide-awake, ethical man,
A good-as-the-rest-of-you, more-than-abreast-of-you,
Down-on-the-East young man.

THE ORDEAL POISON OF THE GABOONESE.—The ordeal poison used by the Gaboonese, and called by them 'm'boundu' or 'icaja', has been the subject of several investigations. Messrs. Rabuteau and Peyre (*Pharm. Jour.*, ser. 3, vol. i) found that the active principle or principles produced effects presenting a certain analogy to those caused by strychnia, but, in other respects, rather resembling the action of brucine; whilst M. Testut affirmed the presence in the bark of two alkaloids, one exercising a convulsive or tetanising action, the other a stupefying or anæsthetic effect. Messrs. Heckel and Schlagdenhauffen, as the result of some chemical and physiological experiments undertaken with a view of clearing up this point, now state (*Jour. de Pharm. et Chim.*, Jan., p. 32), that strychnia is the sole a kaloid and active principle. The alkaloid was found in the root-bark, stem-bark, and leaves, but especially in the cells of the cambium and liber; only traces were found in the medullary rays. The authors are also of opinion that the distinction that has been drawn between the physiological actions of Asiatic and American species of *Strychnos* has no real foundation, the paralysing action being produced by larger quantities of the active principle than the tetanising action. This agrees with the opinion of M. Delaunay as to the action of strychnia.

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The experience of old practitioners confirms the belief that preparations of the Peruvian Bark in many cases are more potent in arresting intermittents than Quinine, therefore a preparation comprising the average constituents of Peruvian Bark, definite in its composition, supplies a want long felt, and it is this which induces us to offer Quinamine as the most desirable preparation in lieu of Quinine. We are free to confess our belief that there is no substitute superior to Quinine, that is to say, that there is no substance equally as potent and reliable now discovered that will replace this valuable and well-tried remedy; but there has been an increasing demand for a cheaper substance than Quinine, and in accordance with this requirement we have made the nearest approach to what is desired, in the discovery of the new Anti-periodic, Quinamine. Excepting Amorphous Quinia, the other constituents of Quinamine have long been used with much success.

North Amherst, Mass., April 1st, 1880.

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WM. DWIGHT, M.D.

Chicago, May 19th, 1880.

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—Sincerely yours, C. C. HIGGINS, M.D.

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Messrs. NEWBERY & SONS. March 1881.

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Stanley House, Blackstock Road, Finsbury Park, N., February 1881.

Gentlemen,—With pleasure I testify to the elegance and efficacy of your SUGAR-COATED PILLS, having used them extensively,—and many of the different kinds,—and found their action certain. In a very extensive midwifery practice, I have also found INGLUVIN of very great service for all the purposes it is intended to effect.—JAS. CARNEGIE GIBSON, L.R.C.P., L.R.C.S., L.M.

Messrs. W. R. WARNER & Co.

8, Cumberland Terrace, Finsbury Park, N., 25th February 1881.

Gentlemen,—I have tried several of your SUGAR-COATED PILLS, and believe that they are most efficient in their action, and a dependable mode of administering medicine. They are certainly *the best in appearance* I have ever seen, and the most pleasant to take.—M. C. SOUTTER, M.R.C.S. Eng., etc.

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Spiral Elastic Belt and Air Pad for Prolapsus Uteri or Ani.

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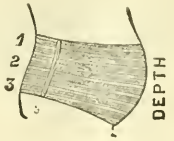
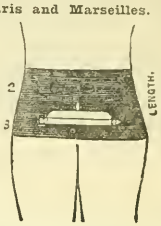


To be worn before or after confinement.



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SIR,—A short time since I was induced by the novelty of the title to send for a bottle of your Liebig's Extract of Meat and Malt Wine. I was perfectly acquainted with the value of the *Extractum Carnis*, and not quite a stranger to the invigorating and fortifying properties of Malt Wine, and, therefore, felt a natural curiosity to test them when combined. Men who work hard, as I do, not muscular hard work, but that which is quite as exhausting, viz., brain work, very often experience the need of, and have sometimes an almost irresistible craving for, a 'pick me up'; and very often the panacea for a time for lassitude, and that state of mind which renders work irksome, are alcoholic stimulants, the use of which must sooner or later end disastrously. The man who can furnish a remedy sure, certain, and harmless, for the lassitude which follows constant brain work, is a benefactor of his species, and may be said to have added many years of usefulness to the lives of useful men. Your extract, if a success, and when more generally known, will be used by all toilers of the mind.
Yours faithfully, O. D. RAY.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).
Queen's Crescent, Haverstock Hill, March 5th, 1881.

DEAR SIR,—Some time since, being greatly fatigued with over-work and long hours at business, my health (being naturally delicate) became very indifferent. I lost all energy, strength, and appetite, and was so weak as to be scarcely able to walk. As you are aware, I sent for a dozen of your Extract of Meat and Malt Wine, which, in a few days, pulled me up marvellously. Three or four glasses of it daily have quite altered and restored me to better health than ever, 'without the assistance of a doctor'. I am now giving it to my son twelve years of age, whom we have always thought consumptive, and from a puny ailing boy he seems to be fast growing into a strong healthy lad. Enclosed you have a cheque. Please send me two dozen of the 'Extract'. With thanks for your prompt attention to my last.
I am, Sir, yours truly, GEORGE A. TYLER.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).
Grampound, February 25th, 1881.

Mrs. Coulson thanks Mr. Coleman for the book and stamps, and she has no doubt but that 'the tonic' is a good one. Mrs. C. encloses twelve stamps for basket.

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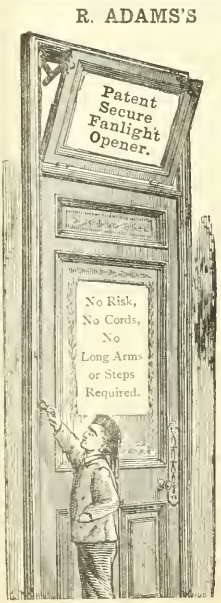

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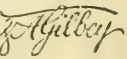

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